



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

US EPA RECORDS CENTER REGION 5



464000

JUN 26 2001

REPLY TO THE ATTENTION OF:

URGENT LEGAL MATTER -- PROMPT REPLY NECESSARY
CERTIFIED MAIL; RETURN RECEIPT REQUESTED

COPY

Re: Chemical Recovery Systems, Inc., 142 Locust Street, Elyria,
Ohio 44035.

Dear Sir or Madam:

This letter (in most cases¹) follows a general notice letter that was issued on March 1, 2001, in connection with the above-referenced site. As the listed contact person for the potentially responsible party (PRP) identified above, this letter has been sent to your attention. This letter serves three basic functions. First, it contains a formal demand for reimbursement of costs that have been incurred, including interest thereon, and that are expected to be incurred, which are subject to interest, in response to the health and environmental concerns at the site. Second, this letter notifies you that a 60 day period of formal negotiations with the U.S. Environmental Protection Agency (U.S. EPA) automatically begins with this letter. Third, this letter provides general and site-specific information to assist you in these negotiations.

NOTICE OF POTENTIAL LIABILITY

As indicated in the general notice letter previously sent regarding this site, U.S. EPA has information indicating that you may be a PRP as defined at Section 107(a) of the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. 9607(a), as amended (CERCLA), with respect to this site.

¹ In a few cases, U.S. EPA has only now determined that a party is a PRP at this Site. In these cases, U.S. EPA is sending both General and Special Notices together with copies of documentation linking the PRP to this Site.

SPECIAL NOTICE AND NEGOTIATION MORATORIUM

U.S. EPA has determined that use of the Section 122(e) special notice procedures specified in CERCLA will facilitate a settlement between U.S. EPA and PRPs for this site. Therefore, under CERCLA Section 122, this letter triggers a 60-day moratorium on certain U.S. EPA response activities at the site. During this 60-day period, the PRPs, including you, are invited to participate in formal negotiations with U.S. EPA. You are also encouraged to voluntarily negotiate a settlement providing for the PRPs, including yourself, to conduct or finance the response activities required at the site. The 60-day negotiation period ends on **August 25, 2001**. The 60-day negotiation moratorium will be extended for an additional 30 days if PRPs provide U.S. EPA with a good faith offer to conduct or finance the remedial investigation/feasibility study (RI/FS). Should a 90-day negotiation moratorium take place, negotiations will conclude on **September 24, 2001**. If settlement is reached between U.S. EPA and the PRPs within the 90-day negotiation moratorium, the settlement will be embodied in a consent order for RI/FS.

FUTURE RESPONSE ACTIONS

U.S. EPA plans to conduct the following CERCLA activities at the site: Remedial Investigation/Feasibility Study (RI/FS) on or about September 24, 2001.

WORK PLAN AND DRAFT CONSENT ORDER/DECREE

A copy of U.S. EPA's statement of work and draft administrative order are attached. This is provided to assist you and other PRPs in developing a good faith offer for conducting the RI/FS.

GOOD FAITH OFFER

As indicated, the 60-day negotiation moratorium triggered by this letter is extended for 30 days if the PRPs submit a good faith offer to U.S. EPA. A good faith offer to conduct or finance the RI/FS is a written proposal that demonstrates the PRPs' qualifications and willingness to conduct or finance the RI/FS and includes the following elements:

1. A statement of willingness by the PRPs to conduct or finance the RI/FS which is consistent with U.S. EPA's statement of work and draft administrative order and provides a sufficient basis for further negotiations.

2. A paragraph-by-paragraph response to U.S. EPA's statement of work and draft administrative order including a response to any other attached documents.
3. A detailed description of the work plan identifying how the PRPs plan to proceed with the work.
4. A demonstration of the PRPs' technical capability to carry out the RI/FS including the identification of the firm(s) that may actually conduct the work or a description of the process they will use to select the firm(s).
5. A demonstration of the PRPs' capability to finance the RI/FS.
6. A statement of willingness by the PRPs to reimburse U.S. EPA for costs incurred in overseeing the PRPs' conduct of the RI/FS.
7. The name, address, and phone number of the party or steering committee who will represent the PRPs in negotiations.

INFORMATION RELEASE

The parties are hereby notified that additional information has been obtained since the previous notice. U.S. EPA is providing the following information as an attachment to this letter:

1. An updated list of names and addresses of PRPs to whom this notification is being sent. Inclusion on, or exclusion from, the list does not constitute a final determination by U.S. EPA concerning the liability of any party for the release or threat of release of hazardous substances at the site.
2. A fact sheet that describes the site.

DEMAND FOR PAYMENT

With this letter, U.S. EPA demands that you reimburse U.S. EPA for its costs incurred to date, and encourages you to voluntarily negotiate a consent order under which you and other PRPs agree to perform the RI/FS.

In accordance with CERCLA, U.S. EPA already has undertaken certain actions and incurred certain costs in response to

conditions at the site. These response actions include several investigations including a Field Investigation for the hydrogeologic and extent of contamination study completed on April 26, 1982, a Preliminary Site Assessment/Site Investigation, and a Site Team Prioritization Report. The cost to date of the response actions performed at the site through U.S. EPA funding is approximately \$408,013.80. In accordance with Section 107(a) of CERCLA, demand is hereby made for payment of the above amount plus any and all interest recoverable under Section 107 or under any other provisions of law.

As indicated above U.S. EPA anticipates expending additional funds for the RI/FS. Whether U.S. EPA funds the entire RI/FS, or simply incurs costs by overseeing the parties conducting these response activities, you are potentially liable for these expenditures plus interest.

ABILITY TO PAY-FUTURE FINANCIAL REVIEW

If your company wishes to settle, but would face a severe financial hardship by remitting the full payment amount, you may request that the U.S. EPA review your financial ability to pay. Under U.S. EPA policy, it is possible in appropriate circumstances for the payment to be made in installments. This may be considered as part of U.S. EPA's financial review. To process a claim of financial hardship, the U.S. EPA will require you to substantiate that claim by submitting detailed financial documentation. A complete description of the U.S. EPA's financial review process is available upon request.

PRP STEERING COMMITTEE

U.S. EPA recommends that all PRPs meet to select a steering committee responsible for representing the group's interests. Establishing a manageable group is critical for successful negotiations with U.S. EPA. U.S. EPA has scheduled an initial PRP meeting on June 27, 2001, at the John Marshall Law School, 315 South Plymouth Court, Chicago, Illinois 60604, from 9:00 A.M. through 4:00 P.M. U.S. EPA encourages each PRP to select one person from its company or organization who will represent its interests.

ADMINISTRATIVE RECORD

Pursuant to CERCLA Section 113(k), U.S. EPA must establish an administrative record that contains documents that form the basis of U.S. EPA's decision on the selection of a response action for a site. The administrative record files, which contain the

documents related to the response action selected for this site, will be available to the public for inspection and comment. These files are located in the Superfund Records Center located at the U.S. EPA regional office, 77 W. Jackson Blvd., Chicago, Illinois. Copies of documents in the administrative record file are also available for public inspection pursuant to 40 CFR 300.805 at the local Site Repository located at:

Elyria Public Library
320 Washington Avenue
Elyria, Ohio 44035
(440) 323-5747

PRP RESPONSE AND U.S. EPA CONTACT PERSON

You are encouraged to contact U.S. EPA by **July 11, 2001**, to indicate your willingness to participate in future negotiations at this site. Otherwise, you have 60 calendar days from this notice to provide U.S. EPA with a good faith offer, in writing, demonstrating your willingness to perform the RI/FS. You may respond individually or through a steering committee if such a committee has been formed. If U.S. EPA does not receive a timely response, U.S. EPA will assume that you do not wish to negotiate a resolution of your liabilities in connection with the response, and that you have declined any involvement in performing the response activities. You may be held liable by U.S. EPA under Section 107 of CERCLA for the cost of the response activities U.S. EPA performs at the site and for any damages to natural resources.

Your response to this notice letter should be sent to:

Deena Sheppard-Johnson
Enforcement Specialist
U.S. Environmental Protection Agency
Remedial Enforcement Support Section
77 West Jackson Boulevard (SR-6J)
Chicago, Illinois 60604-3590

The factual and legal discussions contained in this letter are intended solely for notification and information purposes. They are not intended to be and cannot be relied upon as final U.S. EPA positions on any matter set forth herein. If you have questions of a technical nature, contact Gwendolyn Massenburg, Remedial Project Manager, at (312) 886-0983. For legal questions contact Thomas Nash, Associate Regional Council,

at (312) 886-0552. Address all other questions to Deena Sheppard-Johnson, Enforcement Specialist, at (312) 886-7048.

Sincerely,

Lawrence J. Schnitt

for Wendy Carney, Chief
Remedial Response Branch #1

Attachments:

1. Draft Consent Order
2. Statement of Work
3. Site Fact Sheet
4. SBREFA Fact Sheet
5. Updated PRP List

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5

IN THE MATTER OF:

CHEMICAL RECOVERY SYSTEMS, INC.
142 Locust Street, Elyria, Ohio 44305
CERCLIS ID# OHD 057 001 810

RESPONDENTS
See Attachments

Proceeding Under Sections 104, 122(a), and 122(d)(3) of the Comprehensive Environmental Response, Compensation, and Liability Act as amended (42 U.S.C §§ 9604, 9622(a), 9622(d)(3)).

U.S. EPA Docket No.

ADMINISTRATIVE ORDER ON CONSENT
FOR REMEDIAL INVESTIGATION/FEASIBILITY STUDY

I. INTRODUCTION

1. This Administrative Order on Consent (Consent Order) is entered into voluntarily by the United States Environmental Protection Agency (EPA) and the Respondents listed in Attachment A. Attachment A is hereby wholly incorporated by reference into this Consent Order. The Consent Order concerns the preparation of, performance of, and reimbursement for all costs incurred by EPA in connection with a remedial investigation and feasibility study (RI/FS) at the Chemical Recovery Systems, Inc., located at 142 Locust Street, Lorain County, Elyria, Ohio (Site) as well as other past response costs.

II. JURISDICTION

2. This Consent Order is issued under the authority vested in the President of the United States by Sections 104, 122(a) and 122(d)(3) of the Comprehensive Environmental Response, Compensation, and Liability Act, as amended, 42 U.S.C. Sections 9604, 9622(a), 9622(d)(3) (CERCLA). This authority was delegated to the Administrator of EPA on January 23, 1987, by Executive Order 12580, 52 Fed. Reg. 2926 (1987), and further delegated to Regional Administrators on September 13, 1987, by EPA Delegation No. 14-14-C. This authority has been re-delegated by Region 5's Administrator to the Director, Superfund Division, Region 5 on May 2, 1996.

3. The Respondents agree to undertake all actions required by the terms and conditions of this Consent Order. In any action by EPA or the United States to enforce the terms of this Consent Order, Respondents consent to and agree not to contest the authority or jurisdiction of the Director, Superfund Division, Region 5 to issue or enforce this Consent Order, and agree not to contest the validity of this Order or its terms.

III. PARTIES BOUND

4. This Consent Order will apply to and be binding upon EPA and will be binding upon the Respondents, their agents, successors, assigns, officers, directors and principals.

Respondents are listed in Attachment A, which is wholly incorporated by reference into this Consent Order. Respondents are jointly and severally responsible for carrying out all actions required of them by this Consent Order. The signatories to this Consent Order certify that they are authorized to execute and legally bind the parties they represent to this Consent Order. No change in the ownership or corporate status of the Respondents or of the facility or site will alter Respondents' responsibilities under this Consent Order.

5. The Respondents will provide a copy of this Consent Order to any subsequent owners or successors before ownership rights or stock or assets in a corporate acquisition are transferred. Respondents will provide a copy of this Consent Order to all contractors, subcontractors, laboratories, and consultants which are retained to conduct any work performed under this Consent Order, within fourteen (14) days after the effective date of this Consent Order or the date of retaining their services, whichever is later. Respondents will condition any such contracts upon satisfactory compliance with this Consent Order. Notwithstanding the terms of any contract, Respondents are responsible for compliance with this Consent Order and for ensuring that their subsidiaries, employees, contractors, consultants, subcontractors, agents and attorneys comply with this Consent Order.

IV. STATEMENT OF PURPOSE

6. In entering into this Consent Order, the objectives of EPA and the Respondents are: (a) to determine the nature and extent of contamination and any threat to the public health, welfare, or the environment caused by the release or threatened release of hazardous substances, pollutants or contaminants at or from the site or facility, by conducting a remedial investigation; (b) to determine and evaluate alternatives for remedial action (if any) to prevent, mitigate or otherwise respond to or remedy any release or threatened release of hazardous substances, pollutants, or contaminants at or from the site or facility, by conducting a feasibility study; and (c) to recover response and oversight costs incurred by EPA with respect to this Consent Order.

7. The activities conducted under this Consent Order are subject to approval by EPA and will provide all appropriate necessary information for the RI/FS, and for a record of decision that is consistent with CERCLA and the National Contingency Plan (NCP), 40 C.F.R. Part 300. The activities conducted under this Consent Order will be conducted in compliance with all applicable EPA guidance, policies, and procedures.

V. FINDINGS OF FACT

8. The Site is approximately four (4) acres (with several lots within the 4 acres), and is located at 142 Locust Street (formerly Maple Street) in a predominantly commercial/industrial area near the central business district of the city of Elyria, in Lorain County, Ohio. The Site occupies a part of a peninsula jutting into the Black River. The western boundary of the Site runs along the bank of the East Branch of the Black River (River), the northern boundary adjoins property owned by the Englehard Chemical Company (formerly Harshaw Chemicals), the eastern boundary runs along Locust Street and Englehard Chemical Company, and the Site's southern boundary adjoins the property of M&M Aluminum Siding. Presently, Mrs. Dorothy Obitts owns the site. She leases it to the M&M Aluminum Siding Company. Two buildings remain on Site; located in the southeast corner of the site is a combination warehouse/office building, and a Rodney Hunt Still building. The foundation from the former Brighton Still building is located in the northwest corner. Two sumps located inside of the still buildings allegedly were used to dispose of waste. One of the sumps located in the shell of the Rodney Hunt building is easily identified. Information regarding the construction of these sumps or where the collected waste from the sumps were disposed of is unknown. The Site is fenced in on all sides except for

all sides except for the side bordering the River, which is overgrown by heavy vegetation.

9. The demographics of the Site have been identified by U. S. EPA, (Oct. 25, 1999). The site is located in an Environmental Justice (EJ) Community, (Census Tract 0708, Block Group 1, Population 73, Low income 91.8%, Minority 0.00%). Region 5's EJ community is identified as a block group, usually within a one (1) mile radius of the Site with a low-income or minority population percentage of the block group having either a low-income or minority percentage greater than or equal to two (2) times the State's average. Region 5's EJ Criteria for the State of Ohio (State): Minority 13% or greater, Low-income 60% or greater.

10. In 1960, Russell Obitts began the operations by leasing the lots which comprise the site from the Swiers Coal Company. A few years later Russell Obitts's wife, Dorothy, purchased the parcels from the Coal Company.

11. From 1960 through 1974, Russel Obitts formed two companies, Obitts Chemical Services and Obitts Chemical Company. The former operated as a solvent reclamation facility, the latter sold solvents to industry. Obitts obtained used, "scrap" or "spent" organic solvents from various companies. After distilling away the impurities in the "dirty" solvents, the

"cleaned" reclaimed solvents were repackaged and sold. The solvents were transported to and from the site in 55-gallon drums or by tanker trucks. The collected spent solvents were transferred to above ground storage tanks (ASTs) on the Site. Nine ASTs with a capacity of 53,000 gallons were known to have been situated on the site. (CHED 1979a). The types of solvents known to be reclaimed at the facility during its operation included but were not limited to: acetone, hexane, isopropyl alcohol, tetrachloroethene (PCE), toluene, methylene chloride, methyl ethyl ketone, xylene, and paint solvents. The Obitts operations at the site were plagued by a history of fires, explosions, spills, and overturned tankers. Many of these incidents have been documented by photographs.

12. In 1974, Chemical Recovery Systems (CRS) assumed operation of the Site through a stock purchase agreement with the Obitts Chemical Company. In a separate agreement, CRS leased the lots on the peninsula west of Locust Street from Dorothy Obitts, with an option to purchase. Later, CRS exercised its purchase option. Still later, CRS defaulted on payment for the property, and Dorothy Obitts re-assumed uncontested ownership following a legal action. On August 12, 1991, after a long illness Russell Obitts died.

11. From 1974 to 1981 CRS continued in the business of solvent reclamation. The solvents continued to be stored in 55-

gallon drums, ASTs and tanker trucks waiting to be cleaned on site. The number of 55-gallon drums used for "dirty" solvent storage numbered between 4,000-9,000. Operational problems included improper construction of the ASTs and deteriorating and leaking conditions of many of the drums. Frequent spills and releases were documented. One fatality was recorded when a young worker was overcome by solvent fumes while inside a tanker.

12. In August 1978 and April 1980, Ohio Environmental Protection Agency (Ohio EPA), Northeastern District Office documented releases of chemicals from the CRS site to the East Branch of the Black River. Concerns about these releases into the Black River, and the potentially dangerous conditions on-site frequently documented by the local fire Marshall, led U.S. EPA to bring suit against CRS in 1980, requiring the facility owners to abate problems identified at the site.

13. On October 7, 1980, U.S. EPA filed a complaint alleging violations of Sections 7003 of the RCRA and 301 (a) of the CWA. The two principal concerns of the complaint were the threat of fire and explosion posed by the presence of approximately 4000 drums of chemical waste on the site and the presence of defective distillation units. The second complaint reported a leachate stream containing PCBs which was noted running down the bank entering into the East Branch of the Black

River. A boom in the river isolated some of the contaminants including PCBs and organic chemicals.

17. Some time prior to August 1981, before the Hydrogeological and Extent of Contamination Study was performed by U.S. EPA's Field Investigation Team, Ecology & Environment (E&E), Inc., CRS had removed all tanks, drums, and other spent solvent containers from the site; ceased the receipt, processing and storage of the spent solvents on site and removed both distillation units from the site as reported by the E&E contractors.

18. In April 1982, U.S. EPA's Field Investigation Team, E&E, reported the results of the Hydrogeologic and Extent of Contamination Study performed at CRS during August and September of 1981. E&E collected samples from the Site's soil, ground water, surface water and sediments.

19. Results of the April 1982, Hydrogeologic Study for CRS site reported:

- a. ~920,000 gallons of leachate (of unknown quality) was produced each year by precipitation infiltrating the soils.
- b. The flow rate of ground water entering the River was ~ 59,000 gallons per year.
- c. The velocity of ground water flow is ~ 33ft/yr.
- d. The ground water flow is to the west toward the river with an average gradient of 0.05.

e. The interception of ground water by the sewer line under drain causes an increase in the flow rate to the River, and concentrates at the outflow which discharges into the River.

20. The results of the April 1982 Geologic Investigation reported:

a. The CRS site is situated on a thin cover of unconsolidated heterogenous, man-made fill, predominantly composed of clay, sand, and gravel (including bricks, cinders, slag, etc).

b. The thickness of the unconsolidated materials ranged from four feet near Locust Street to twenty-eight feet at the western portion of the site near the river.

c. The unconsolidated materials are underlain by the Mississippian age Berea Sandstone.

d. The bedrock is located ~ four feet below ground surface (bgs) on the eastern side of the site.

e. The bedrock on the western side of the site near the river ranges between twenty to twenty-eight feet bgs (Herron, 1979).

f. The Berea Sandstone below the fill is a source of potable water, oil, and natural gas (Northern Ohio Geologic Survey).

g. The ground water beneath the CRS site is present

at ~ ten feet bgs.

21. In August and September of 1981, E&E installed four monitoring wells (MW). MW-1 was installed down gradient to ground water flow, near the former Brighton Still building, northwest corner of the site. MW-2 was installed down gradient to ground water flow, near a former drum storage area, in the southwest corner of the site. MW-3 and MW-4 were installed up gradient to ground water flow (background wells). The down gradient MW-1 & 2 were installed to determine ground water quality. The results of the ground water sampling indicate that past activities at the CRS site have deteriorated the ground water quality. The following organic compounds detected above the maximum contaminant levels (MCLs) (all concentrations are reported in parts per billion (ppb)) in drinking water at the Site were: methylene chloride=71,000, 1,1,1 tri-chloroethane=12,000 (causes nervous system and circulatory dysfunction, the MCL is 200ppb), trichloroethylene=6,300 (central nervous system depressant, the MCL is 5ppb) 1,2 trichloroethylene=6,100, benzene=1100 (acute benzene poisoning affects the central nervous system, and death results from respiratory failure, the MCL is 5ppb), toluene=100,000 (a neurotoxin, also adversely affects the liver and kidneys, the MCL is 1000ppb), ethylbenzene=14,000 (adversely affects the liver or kidney, the MCL is 700ppb) phenol=590, PCB 1248=29

PCB-1254=18 (adversely affects the thymus gland, immune system, reproductive systems, and is a possible carcinogen), and naphthalene=130. The same compounds were detected in MW-2, however, at lower concentrations with the exception of vinyl chloride=1000 (possible carcinogen). The up gradient background MW-3&4 data analysis reported non-detects from all the compound analyzed. The range of inorganic compounds detected above MCLs in MW 1&2 were: lead=840-2500 (causes dysfunction of the kidney, nervous system and the hemopoietic system) (background sample for lead=580-600), barium=164-2740 (increases blood pressure, the MCL is 2000ppb) cadmium=195-825 (adversely affects lungs and kidneys, the MCL is 5ppb) beryllium=8-14, (causes intestinal lesions, the MCL is 5 ppb) copper=670-1700, and arsenic=140-700 (a bioaccumulator along the food chain, causes central nervous system toxicity, and cancer of skin and respiratory tract, the arsenic MCL is currently under review to decrease the limit, presently the MCL is 50ppb).

22. Four surface water samples were collected from the River. Only one sample was collected below the sewer outfall, adjacent to the Site; analysis of this sample detected 14 organic compounds which were not found in other surface water samples; these compounds included: chloroform (heptaotoxin) , carbon tetrachloride (causes liver failure, possible carcinogen), dichlorobromomethane, chloroethane, vinyl chloride,

trichloroethylene, benzene, toluene, 1,3 dichlorobenzene, 1,4 dichlorobenzene, and naphthalene.

23. In August 1981 seventeen soil samples from five(5) soil borings on Site were analyzed to determine the extent of the organic and inorganic contamination.

24. One sample showed a general decrease in organic concentrations with depth, most likely due to surficial dumping or spillage.

25. Another sample collected within three (3) feet of the water table analyzed results showed an increased amount of contamination, when compared with the upper samples of the same boring, but at a deeper depth.

26. Most of the soil samples analyzed reported the concentrations of organic contaminants increased with the sample depth; for instance, a sample collected from 15 to 16.5 feet (below the water table) revealed toluene and ethyl benzene at 530ppm and 240ppm, respectively.

27. The background quality of soil sample analyzed reported trace amounts of chloroform.

28. The inorganic sampling analysis of the soil borings reported elevated concentrations of cadmium, nickle, lead, zinc, and mercury=23 ppm(sampling depth between 5 to 11 feet).

29. Sediment samples were collected simultaneously with the surface water samples from the River.

30. The review of the organic analysis revealed that two groups of chemicals existed:

a. A group of chemicals found ubiquitously distributed included: chrysene, benzo (k) fluoro-anthene, anthracene, flourene, and dibenzo (a,h) anthracene.

b. The second group included organic compounds such as: trichlorofluoromethane, chloromethane, 1,1 dichloromethane, 1,1,1 trichloroethane, vinyl chloride, benzene, toluene, ethyl benzene, phenol, dichlorobenzene, PCBs, several phthalates and naphthalene (found concentrated in the sediments by the sewer outfall).

31. The inorganic analyses of the sediment sampling reported elevated concentrations of aluminum, manganese, arsenic; and at the sewer outfall location cadmium, lead, zinc, copper, and nickel.

32. The conclusions of the field investigation performed by E&E were:

a. Soil samples at the Site reported contamination at various depths with organic chemicals, most likely due to the potential sources: sumps, surficial dumping and groundwater contact.

b. Of the twenty-three organic compounds identified in the soils, fifteen were found in the ground water monitoring wells.

33. On July 12, 1983, a Consent Decree was issued for CRS to address the imminent danger by performing the following actions:

a. Excavate all visibly contaminated soil identified during a joint inspection conducted by representatives of EPA and CRS.

b. Excavate the perimeter of the Brighton Still building in the northwest corner of the Site to a depth of 1 foot and a distance of 2 feet beyond the perimeter of the foundation.

c. Dispose of all removed soil at an EPA approved disposal site.

d. Backfill the excavated areas with clean, clay containing fill.

e. Gently grade the site towards the River.

33. Prior to the Field Investigation performed by EPA contractors E&E during August and September of 1981, CRS had removed all tanks, drums and other spent solvent containers from the Site; ceased the receipt, processing, and storage of "dirty", spent solvents on site; removed all distillation units; and demolished all the buildings on the site except for the warehouse/office building, and a "shell" of the Rodney Hunt Still building.

34. At the time of the 1983 Consent Decree, CRS had

also secured the Site with a fence, filled in the sumps with concrete located under both still buildings and leveled the dikes on Site. CRS removed contaminated soil and disposed of the soil in an approved waste disposal site by September 15, 1983. After conducting a site inspection on November 7, 1983, EPA concluded that CRS was in compliance with the clean-up stipulated in the Consent Decree.

35. Ohio EPA personnel conducted a Site Team Prioritization (STEP) Investigation on behalf of EPA and, following the EPA site investigation protocol, collected samples from the Site during August 1996.

36. During the STEP investigation, Ohio collected samples from the groundwater, soil, and from the river's surface water and sediments.

37. Previous investigations and reports indicated that four ground water monitoring wells existed for sampling on the Site. However, during the STEP investigation only two wells could be located; the wells were considered to be hydraulically down gradient, and the background wells could not be identified. The static water levels ranged between 17.7 feet and 23.5 feet. The following compounds highest "hits" (all concentrations reported in ppb; "J" values are defined as an estimated values that are less than the sample quantitation limit, but greater than zero) were detected during the August 1996 sampling event:

1,1 dichloro-ethane=450J, 1,2 dichloroethene (total)=1400J, toluene=11000, ethylbenzene=4900, styrene=800J, toluene=86,000, phenol=32J, 2 methylphenol=270, di-n-butylphthalate=30J, 4 methylphenol=150, 2,4 dimethylphenol=650, naphthalene=220, 2 methylnaphthalene=12J, Aroclor(PCB)1248=2.3, and Aroclor 1254=5.3 ppb.

38. Several metals and cyanide were detected in all ground water samples; the highest values, reported in ppb, are: arsenic=466, cyanide=49.7 and aluminum=2250, zinc=5270, cyanide=105, lead=27.1, chromium=137, cadmium=21.4 and barium=244 ppb.

39. Several organic compounds and metals were detected in all the soil samples analyzed from the Site. Due to the inability to find a suitable location to collect background soil samples, none were taken during the soil sampling event.

40. The most notable organic compounds detected from the soil sampling event (reported in ppb) were: 1,2 dichloro-ethene=1400, tetrachloroethene=500, 1,1,1 trichloroethane=14J, trichloroethene=19000, tetrachloroethene=5500, phenanthrene=3400, fluoranthene=6800, pyrene=6900, butylbenzylphthalate=8000, chrysene=3800 and benzo(a)pyrene=5900ppb.

41. The metals and cyanide (reported in ppm) detected in site soils at elevated concentrations were: Aluminum= 5210-11,400, lead=56.3-1180, zinc=103-1460, and 0.6-31.6.

42. A total of four surface water samples were collected from the River, including the background sample. The most significant detections (reported in ppb) included vinyl chloride=65, 1,1 dichloroethane=110, benzene=19, ethylbenzene=71, and total xylenes=19ppb.

43. Three sediment samples plus a duplicate sample were collected from the River. The sampling locations were chosen based on the evaluation of historical data, potential source areas, and site reconnaissance.

44. The following organic contaminants were detected in the sediment samples (reported in ppb): benzene=34; 2-butanone=4J; ethylbenzene 2J; total xylene=13J; acenaphthylene=62J; 4-nitrophenol=100J; carbazole=200; fluoranthene=2300; butylbenzylphthalate=86J; nitroaniline=240J; and acenaphthene was detected in all samples except the background sample=140J, 78J, and 67J.

45. The following pesticides/PCB were detected in the sediment sample (reported in ppb): endosulfan sulfate=2.7J; aldrin 0.18J; endrin aldehyde=1.6J; gamma-chlordane=3; PCB aroclor-1254=100; and aroclor-1260=16J.

46. The following highest "hits" of inorganics were detected in the sediment samples collected (reported in ppb): aluminum=14,100; chromium=34.8; cobalt=18; lead=53.1; copper=99.5; barium=146; magnesium=5280; manganese=487; mercury=0.43; nickel=51.4; thallium=0.85; vanadium=29.1; and zinc=198.

47. Elevated site-related contaminants were detected in all of the environmental media. The five pathways evaluated during the STEP investigation were ground water, surface water, sediments, soil, and air.

48. In terms of the ground water pathway, based on the data collected and the analytical results, a high potential exists for ground water contamination to leach into the surface water. The potential for private drinking water supplies to be impacted by the site is low because, down gradient of the site, drinking water comes from the local municipality. The impact to the surface water from the Site needs further investigation through the collection of additional sampling and investigatory work.

49. The soil pathway main source of contamination was from the seepage due to improper storage and handling of drums, spills, and leakage which occurred through improper hose connections to tanks and stills. High concentrations of organic compounds, inorganics and relatively low pesticides/PCBs were detected in the soils on Site and are highly likely to infiltrate into the ground water. Presently no residences, schools, day care facilities or sensitive populations are located close to the Site, as it is located in an industrial/commercial area. Only one up gradient resident is located within one mile of the Site. The primary threat of exposure to the soil is from direct

contact to workers or by trespassers who approach the Site from the portion near the River that is not fenced. Additionally the number of employees at M&M Aluminum Siding is unknown.

50. The surface water pathway targets include intakes that supply drinking water, fisheries, and sensitive environments. From the Site, surface water runoff flows into the East Branch of the Black River and eventually joins with the main branch of the Black River. The Black River flows north by northeast, emptying into Lake Erie. The area of concern (the CRS Site) runs from the probable point of entry (PPE) downstream fifteen miles to the target distance limit (TDL). Drinking targets include surface water intakes. From the PPE to the TDL there are not any intakes and therefore no targets exist via this route. Elywood Park, Cascade Park, and Washington Park are all located along the Black River and are presently picnic areas only. French Creek Park and Black River Park are also located along the Black River and offer picnic areas, as well as permitted fishing. There are approximately 4 miles of wetlands located in the 15 mile TDL. Federally endangered species--the bald eagle and the Indiana bat--are known inhabitants in Lorain County and possibly in areas along the Black River, within the 15 mile TDL.

51. The sediment pathway sample analysis demonstrated organic and inorganic contamination. The main source of

contamination is from the surface water, and Site run-off. The impact to the surface water and sediment from the Site needs further investigation through the collection of additional sampling and investigatory work.

52. During all of the Site investigation, release of contaminant constituents to the air were not previously documented. The most apparent target of this pathway would be through inhalation and dermal contact by workers in the areas of the former above ground storage tanks and former drum storage areas.

53. Currently, the Site is not listed on the National Priorities List (NPL). The Site is, however, considered as NPL-equivalent, and may be proposed for inclusion on the NPL pertaining to Section 105 of CERCLA, 42 U.S.C. § 9605.

54. Chemical Recovery Systems, Inc., of Ohio, was an owner and operator of the Site.

55. Respondents listed in Attachment A of this Consent Order are persons who arranged for transport, disposal, or treatment, of the hazardous substance found at the Site.

56. EPA has completed a Hydrogeologic and Extent of Contamination Field Investigation Study.

57. Ohio EPA conducted a Site Team Evaluation Prioritization Investigation at the Site, which included a pre-scoring for the NPL.

58. On July 2, 1999, the Agency for Toxic Substances and Disease Registry (ATSDR) with the support of the City of Elyria Health Department completed a Health Consultation which provided information about the potential health effects associated with the Site.

59. Other investigations included the identification of potential sources of ground water contamination and the development of aerial photographs to map the Site's condition over a period of years.

60. EPA issued General Notices of Potential Liability and information request under Section 104(e) of CERCLA, 42 U.S.C. § 9604(e), to Respondents.

VI. CONCLUSIONS OF LAW AND DETERMINATIONS

61. The site is a "facility" as defined in Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

62. Wastes and constituents thereof at the site, sent to the site, disposed of at the site, and/or transported to the site, as the site is identified in paragraph 9, are "hazardous substances" as defined in Section 101(14) of CERCLA, 42 U.S.C. Section 9601(14), or constitute "any pollutant or contaminant," that may present an imminent and substantial danger to public health or welfare under Section 104(a)(1) of CERCLA.

63. The presence of hazardous substances at the site or the past, present or potential migration of hazardous substances

currently located at or emanating from the site, constitute actual and/or threatened "releases" as defined in Section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

64. Respondents are "persons" as defined in Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

65. Respondents are responsible parties under Sections 104, 107 and 122 of CERCLA, 42 U.S.C. Sections 9604, 9607 and 9622.

66. The actions required by this Consent Order are necessary to protect the public health or welfare or the environment, or in the public interest, 42 U.S.C. § 9622(a), are consistent with CERCLA and the NCP, 42 U.S.C. §§ 9604(a)(1), 9622(a), and will expedite effective remedial action and minimize litigation, 42 U.S.C. § 9622(a).

VII. NOTICE

67. By providing a copy of this Consent Order to the State, EPA is notifying the State of Ohio that this Order is being issued and that EPA is the lead agency for coordinating, overseeing, and enforcing the response action required by the Order.

VIII. WORK TO BE PERFORMED

68. All work performed under this Consent Order will be under the direction and supervision of qualified personnel. Within thirty (30) days of the effective date of this Order, and

before the work outlined below begins, the Respondents will notify EPA in writing of the names, titles, and qualifications of the personnel, including contractors, subcontractors, consultants and laboratories to be used in carrying out such work. The qualifications of the persons undertaking the work for Respondents will be subject to EPA's review, for verification that such persons meet minimum technical background and experience requirements. This Order is contingent on Respondents' demonstration to EPA's satisfaction that Respondents are qualified to perform properly and promptly the actions set forth in this Consent Order. If EPA disapproves in writing of any person(s)' technical qualifications, Respondents will notify EPA of the identity and qualifications of the replacements within thirty (30) days of the written notice. If EPA subsequently disapproves of the replacement(s), EPA reserves the right to terminate this Order and to conduct a complete RI/FS, and to seek reimbursement for costs and penalties from Respondents. During the course of the RI/FS, Respondents will notify EPA in writing of any changes or additions in the personnel used to carry out such work, providing their names, titles, and qualifications. EPA will have the same right to approve changes and additions to personnel as it has hereunder regarding the initial notification.

69. Respondents will conduct activities and submit

deliverables as provided by the attached RI/FS Statement of Work, for the development of the RI/FS. All such work will be conducted in accordance with CERCLA, the NCP, and EPA guidance including, but not limited to, the "Interim Final Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA" (OSWER Directive # 9355.3-01), "Guidance for Data Usability in Risk Assessment" (OSWER Directive #9285.7-05) and guidance referenced therein, and guidance referenced in the Statement of Work, as may be amended or modified by EPA. The general activities that Respondents are required to perform are identified below, followed by a list of deliverables. The tasks that Respondents must perform are described more fully in the Statement of Work and guidance. The activities and deliverables identified below will be developed as provisions in the work plan and sampling and analysis plan, and will be submitted to EPA as provided. All work performed under this Consent Order will be in accordance with the schedules herein, and in full accordance with the standards, specifications, and other requirements of the work plan and sampling and analysis plan, as initially approved or modified by EPA, and as may be amended or modified by EPA from time to time. For the purposes of this Order, day means calendar day unless otherwise noted in the Order.

A. Task I: Scoping

EPA determines the site-specific objectives of the RI/FS and devises a general management approach for the site, as stated in the attached Statement of Work. Respondents will conduct the remainder of scoping activities as described in the attached Statement of Work and referenced guidance. At the conclusion of the project planning phase, Respondent will provide EPA with the following deliverables:

1. RI/FS Work Plan. Within ninety (90) days of the effective date of this Order, Respondents will submit to EPA and Ohio EPA a complete RI/FS work plan. If EPA disapproves of or requires revisions to the RI/FS work plan, in whole or in part, Respondents will amend and submit to EPA a revised work plan which is responsive to the directions in all EPA comments, within twenty-one (21) days of receiving EPA's comments.

2. Sampling and Analysis Plan. Within ninety (90) days of the effective date of this Order, Respondents will submit to EPA the sampling and analysis plan. This plan will consist of a field sampling plan (FSP) and a quality assurance project plan (QAPP), as described in the Statement of Work and guidances. If EPA disapproves of or requires revisions to the sampling and analysis plan, in whole or in part, Respondents will amend and submit to EPA a revised sampling and analysis plan which is responsive to the directions in all EPA comments, within twenty-one (21) days of receiving EPA's comments.

3. Site Health and Safety Plan. Within ninety (90) days of the effective date of this Order, Respondents will submit to EPA the site health and safety plan. Following approval or modification by EPA, the RI/FS work plan and the sampling and analysis plan are incorporated by reference herein.

B. Task II: Community Relations Plan

EPA will prepare a community relations plan, in accordance with EPA guidance and the NCP. Respondents will provide information supporting EPA's community relations programs.

C. Task III: Site Characterization Following EPA approval or modification of the work plan and sampling and analysis plan, Respondents will implement the provisions of these plans to characterize the site. Respondents will complete site characterization within six (6) months of EPA approval or modification of the work plan and sampling and analysis plan. Respondents will provide EPA with analytical data within forty-five (45) days of each sampling activity, in an electronic format (see [http:// www.epa.gov/region5/superfund/edman](http://www.epa.gov/region5/superfund/edman) for instructions) showing the location, medium and results. Within seven (7) days of completion of field activities, Respondents will notify EPA in writing. During site characterization, Respondents will provide EPA with a Preliminary Site Characterization Summary. Within ninety (90) days of completion of the field sampling and analysis, as specified in the work

plan, Respondents will submit a site characterization summary to EPA.

D. Task IV: Draft Remedial Investigation Report Within 180 days of receipt, Respondents will submit a draft remedial investigation report consistent with the Statement of Work, work plan, sampling and analysis plan. If EPA disapproves of or requires revisions to the remedial investigation report, in whole or in part, Respondents will amend and submit to EPA a revised remedial investigation report which is responsive to the directions in all EPA comments, within thirty (30) days of receiving EPA's comments.

E. Task V: Treatability Studies. Respondents will conduct treatability studies, except where Respondents can demonstrate to EPA's satisfaction that they are not needed. The major components of the treatability studies include determination of the need for and scope of studies, the design of the studies, and the completion of the studies, as described in the Statement of Work. During treatability studies, Respondents will provide EPA with the following deliverables:

1. Identification of Candidate Technologies

Memorandum. This memorandum will be submitted within 180 days of the effective date of this Order. If EPA disapproves of or requires revisions to the technical memorandum identifying candidate technologies, in whole

or in part, Respondents will amend and submit to EPA a revised technical memorandum identifying candidate technologies which is responsive to the directions in all EPA comments, within twenty one (21) days of receiving EPA's comments.

2. Treatability Testing Statement of Work. If EPA determines that treatability testing is required, within twenty-one (21) days thereafter [or as specified by EPA], Respondents will submit a treatability testing statement of work.

3. Treatability Testing Work Plan. Within thirty (30) days of submission of the treatability testing statement of work, Respondents will submit a treatability testing work plan, including a schedule. If EPA disapproves of or requires revisions to the treatability testing work plan, in whole or in part, Respondents will amend and submit to EPA a revised treatability testing work plan which is responsive to the directions in all EPA comments, within twenty-one (21) days of receiving EPA's comments.

4. Treatability Study Sampling and Analysis Plan. Within sixty (60) days of the identification of the need for a separate or revised QAPP or FSP, Respondents will submit a treatability study sampling and analysis plan.

If EPA disapproves of or requires revisions to the treatability study sampling and analysis plan, in whole or in part, Respondents will amend and submit to EPA a revised treatability study sampling and analysis plan which is responsive to the directions in all EPA comments, within twenty-one (21) days of receiving EPA's comments.

5. Treatability Study Site Health and Safety Plan.

Within sixty (30) days of the identification of the need for a revised health and safety plan, Respondents will submit a treatability study site health and safety plan.

6. Treatability Study Evaluation Report. Within thirty (30) days of completion of any treatability testing, Respondents will submit a treatability study evaluation report as provided in the Statement of Work and work plan. If EPA disapproves of or requires revisions to the treatability study report, in whole or in part, Respondents will amend and submit to EPA a revised treatability study report which is responsive to the directions in all EPA comments, within twenty-one (21) days of receiving EPA's comments.

F. Task V: Development and Screening of Alternatives.

Respondents will develop an appropriate range of waste management options that will be evaluated through the

development and screening of alternatives, as provided in the Statement of Work and work plan. During the development and screening of alternatives, Respondents will provide EPA with the following deliverables:

1. Memorandum on Remedial Action Objectives. Within ninety (90) days of completion of the field sampling and analysis, as specified in the work plan, Respondents will submit a memorandum on remedial action objectives to EPA.

2. Memorandum on Development and Preliminary Screening of Alternatives. Assembled Alternatives Screening Results and Final Screening. Within ninety (90) days of completion of the field sampling and analysis, as specified in the work plan, the Respondents will submit a memorandum summarizing the development and screening of remedial alternatives, including an alternatives array document as described in the Statement of Work.

G. Task VI: Detailed Analysis of Alternatives. Respondents will conduct a detailed analysis of remedial alternatives, as described in the Statement of Work and work plan. During the detailed analysis of alternatives, Respondents will provide EPA with the following deliverables and presentation:

1. Report on Comparative Analysis and Presentation to EPA. Within ninety (90) days of submission of a

memorandum on the development and screening of remedial alternatives, Respondents will submit a report on comparative analysis to EPA summarizing the results of the comparative analysis performed between the remedial alternatives. If EPA disapproves of or requires revisions to the report on comparative analysis, Respondent(s) will amend and submit to EPA a revised report on comparative analysis which is responsive to the directions in all EPA comments, within twenty-one (21) days of receiving EPA's comments. Within two (2) weeks of submitting the original report on comparative analysis, Respondents will make a presentation to EPA during which Respondents will summarize the findings of the remedial investigation and remedial action objectives, and present the results of the nine (9) criteria evaluation and comparative analysis, as described in the Statement of Work.

2. Draft Feasibility Study Report. Within ninety (90) days of the presentation to EPA, Respondents will submit a draft feasibility study report which reflects the findings in EPA's baseline risk assessment. Respondents will refer to Table 6-5 of the RI/FS Guidance for report content and format. If EPA disapproves of or requires revisions to the draft feasibility study report in whole

or in part, Respondents will amend and submit to EPA a revised feasibility study report which is responsive to the directions in all EPA comments, within twenty-one (21) days of receiving EPA's comments. The report as amended, and the administrative record, will provide the basis for the proposed plan under CERCLA §§ 113(k) and 117(a), 42 U.S.C. §§ 9613 (k), 9617(a) and will document the development and analysis of remedial alternatives.

70. EPA reserves the right to comment on, modify and direct changes for all deliverables. At EPA's discretion, Respondents must fully correct all deficiencies and incorporate and integrate all information and comments supplied by EPA either in subsequent or resubmitted deliverables.

71. Respondents will not proceed further with any subsequent activities or tasks until receiving EPA approval for the following deliverables: RI/FS work plan and sampling and analysis plan, draft remedial investigation report, treatability testing work plan and sampling and analysis plan, and draft feasibility study report. While awaiting EPA approval on these deliverables, Respondents will proceed with all other tasks and activities which may be conducted independently of these deliverables, in accordance with the schedule set forth in this Consent Order.

72. Upon receipt of the draft FS report, EPA will

evaluate, as necessary, the estimates of the risk to the public and environment that are expected to remain after a particular remedial alternative has been completed.

73. For all remaining deliverables not enumerated above in paragraph 71, Respondents will proceed with all subsequent tasks, activities and deliverables without awaiting EPA approval on the submitted deliverable. EPA reserves the right to stop Respondents from proceeding further, either temporarily or permanently, on any task, activity or deliverable at any point during the RI/FS.

74. In the event that Respondents amend or revise a report, plan or other submittal upon receipt of EPA comments, if EPA subsequently disapproves of the revised submittal, or if subsequent submittals do not fully reflect EPA's directions for changes, EPA retains the right to seek stipulated or statutory penalties; perform its own studies, complete the RI/FS (or any portion of the RI/FS under CERCLA and the NCP, and seek reimbursement from the Respondents for its costs; and/or seek any other appropriate relief.

75. In the event that EPA takes over some of the tasks, but not the preparation of the RI/FS, Respondents will incorporate and integrate information supplied by EPA into the final RI/FS report.

76. Neither failure of EPA to expressly approve or

disapprove of Respondents' submissions within a specified time period(s), nor the absence of comments, will be construed as approval by EPA. Whether or not EPA gives express approval for Respondents' deliverables, Respondents are responsible for preparing deliverables acceptable to EPA.

77. Respondents will, prior to any off-site shipment of hazardous substances from the site to an out-of-state waste management facility, provide written notification to the appropriate state environmental official in the receiving state and to EPA's Designated Project Coordinator of such shipment of hazardous substances. However, the notification of shipments will not apply to any such off-site shipments when the total volume of such shipments will not exceed ten (10) cubic yards.

(a) The notification will be in writing, and will include the following information, where available: (1) the name and location of the facility to which the hazardous substances are to be shipped; (2) the type and quantity of the hazardous substances to be shipped; (3) the expected schedule for the shipment of the hazardous substances; and (4) the method of transportation. Respondents will notify the receiving state of major changes in the shipment plan, such as a decision to ship the hazardous substances to another facility within the same state, or to a facility in another state.

(b) The identity of the receiving facility and state will

be determined by Respondents following the award of the contract for the remedial investigation and feasibility study.

Respondent(s) will provide all relevant information, including information under the categories noted in paragraph 77(a) above, on the off-site shipments, as soon as practical after the award of the contract and before the hazardous substances are actually shipped.

IX. BASELINE RISK ASSESSMENT

78. Respondents will perform the baseline risk assessment. The major components of the baseline risk assessment include contaminant identification, exposure assessment, toxicity assessment, and human health and ecological risk characterization. Respondents will provide, after review of all the pertinent and available site characterization information and data, sufficient information concerning the baseline risks such that they can assess this information, along with the Remedial Action Objectives. This information submittal to the EPA by Respondents will be in the form of two or more baseline risk assessment memoranda. One memorandum will include a list of the chemicals of concern for human health and ecological effects and the corresponding toxicity values. The second memorandum will include a list of the current and potential future exposure scenarios, exposure assumptions, and exposure point concentrations that EPA plans to use in the

baseline risk assessment. The public may comment on these memoranda. However, the EPA is obligated to respond only to significant comments on the Record of Decision that are submitted during the formal public comment period. After considering any significant comments received, EPA will direct the Respondents to prepare a baseline risk assessment report based on the data collected by the Respondents during the site characterization. EPA will release this report to the public at the same time it releases the final RI report. Both reports will be put into the administrative record for the Site. EPA will respond to all significant comments on the memoranda or the baseline risk assessment that are resubmitted during the formal comment period in the Responsiveness Summary of the Record of Decision.

X. MODIFICATION OF THE WORK PLAN

79. If at any time during the RI/FS process, Respondents identify a need for additional data, a memorandum documenting the need for additional data will be submitted to the EPA Project Coordinator within twenty (20) days of identification. EPA in its discretion will determine whether the additional data will be collected by Respondents and whether it will be incorporated into reports and deliverables.

80. In the event of conditions posing an immediate threat to human health or welfare or the environment,

Respondents will notify EPA and the State immediately. In the event of unanticipated or changed circumstances at the site, Respondents will notify the EPA Project Coordinator by telephone within 24 hours of discovery of the unanticipated or changed circumstances. In addition to the authorities in the NCP, in the event that EPA determines that the immediate threat or the unanticipated or changed circumstances warrant changes in the work plan, EPA will modify or amend the work plan in writing accordingly. Respondents will perform the work plan as modified or amended.

81. EPA may determine that in addition to tasks defined in the initially approved work plan, other additional work may be necessary to accomplish the objectives of the RI/FS as set forth in the Statement of Work for this RI/FS. EPA may require that the Respondent perform these response actions in addition to those required by the initially approved work plan, including any approved modifications, if it determines that such actions are necessary for a complete RI/FS. Respondents will confirm their willingness to perform the additional work in writing to EPA within seven (7) days of receipt of the EPA request or Respondents will invoke dispute resolution. Subject to EPA resolution of any dispute, Respondents will implement the additional tasks which EPA determines are necessary. The additional work will be completed according to the standards,

specifications, and schedule set forth or approved by EPA in a written modification to the work plan or written work plan supplement. EPA reserves the right to conduct the work itself at any point, to seek reimbursement from Respondents later, and/or to seek any other appropriate relief.

XI. QUALITY ASSURANCE

82. Respondents will assure that work performed, samples taken and analyses conducted conform to the requirements of the Statement of Work, the QAPP and guidance identified therein. Respondents will assure that field personnel used by Respondents are properly trained in the use of field equipment and in chain of custody procedures.

XII. FINAL RI/FS, PROPOSED, PLAN, PUBLIC COMMENT RECORD OF DECISION, ADMINISTRATIVE RECORD

83. EPA retains the responsibility for the release to the public of the RI/FS report. EPA retains responsibility for the preparation and release to the public of the proposed plan and record of decision in accordance with CERCLA and the NCP.

84. Respondents will provide EPA with the final RI/FS report. EPA will provide Respondents with the final RI/FS report (if it differs from that submitted), proposed plan and record of decision.

85. EPA will determine the contents of the administrative record file for selection of the remedial action.

Respondents must submit to EPA documents developed during the course of the RI/FS upon which selection of the response action may be based. Respondents will provide copies of plans, task memoranda for further action, quality assurance memoranda and audits, raw data, field notes, laboratory analytical reports and other reports. Respondents must additionally submit any previous studies conducted under state, local or other federal authorities relating to selection of the response action, and all communications between Respondents and state, local or other federal authorities concerning selection of the response action. At EPA's discretion, Respondents may establish a community information repository at or near the site, to house one copy of the administrative record.

XIII. PROGRESS REPORTS AND MEETINGS

86. Respondents will make presentations at, and participate in, meetings at the request of EPA during the initiation, conduct, and completion of the RI/FS. In addition to discussion of the technical aspects of the RI/FS, topics will include anticipated problems or new issues. Meetings will be scheduled at EPA's discretion.

87. In addition to the deliverables set forth in this Order, Respondents will provide to EPA monthly progress reports by the 10th day of the following month. At a minimum, with

respect to the preceding month, these progress reports will (1) describe the actions which have been taken to comply with this Consent Order during that month, (2) include all results of sampling and tests and all other data received by the Respondents, (3) describe work planned for the next two months with schedules relating such work to the overall project schedule for RI/FS completion and (4) describe all problems encountered and any anticipated problems, any actual or anticipated delays, and solutions developed and implemented to address any actual or anticipated problems or delays.

XIV. SAMPLING, ACCESS, AND DATA AVAILABILITY/ADMISSIBILITY

88. All results of sampling, tests, modeling or other data (including raw data) generated by Respondents, or on Respondents' behalf, during implementation of this Consent Order, will be submitted to EPA in the subsequent monthly progress report as described in Section XII of this Order. EPA will make available to the Respondents validated data generated by EPA unless it is exempt from disclosure by any federal or state law or regulation.

89. Respondents will verbally notify EPA at least fifteen (15) days prior to conducting significant field events as described in the Statement of Work, work plan or sampling and analysis plan. At EPA's verbal or written request, or the request of EPA's oversight assistant, Respondents will allow

split or duplicate samples to be taken by EPA (and its authorized representatives) of any samples collected by the Respondents in implementing this Consent Order. All split samples of Respondents will be analyzed by the methods identified in the QAPP.

90. At all reasonable times, EPA and its authorized representatives will have the authority to enter and freely move about all property at the Site and off-site areas where work, if any, is being performed, for the purposes of inspecting conditions, activities, the results of activities, records, operating logs, and contracts related to the site or Respondents and its contractor pursuant to this order; reviewing the progress of the Respondents in carrying out the terms of this Consent Order; conducting tests as EPA or its authorized representatives deem necessary; using a camera, sound recording device or other documentary type equipment; and verifying the data submitted to EPA by the Respondents. The Respondents will allow these persons to inspect and copy all records, files, photographs, documents, sampling and monitoring data, and other writings related to work undertaken in carrying out this Consent Order. Nothing herein will be interpreted as limiting or affecting EPA's right of entry or inspection authority under federal law. All parties with access to the site under this paragraph will comply with all approved health and safety plans.

91. The Respondents may assert a claim of business confidentiality covering part or all of the information submitted to EPA pursuant to the terms of this Consent Order under 40 C.F.R. Part 2, Subpart B, provided such claim is allowed by § 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7). This claim will be asserted in the manner described by 40 C.F.R. § 2.203(b) and substantiated at the time the claim is made. Information determined to be confidential by EPA will be given the protection specified in 40 C.F.R. Part 2. If no such claim accompanies the information when it is submitted to EPA, it may be made available to the public by EPA or the State without further notice to the Respondents. Respondents agree not to assert confidentiality claims with respect to any data related to site conditions, sampling, or monitoring.

92. In entering into this Order, Respondents waive any objections to any data gathered, generated, or evaluated by EPA, the State or Respondents in the performance or oversight of the work that has been verified according to the quality assurance/quality control (QA/QC) procedures required by the Consent Order or any EPA-approved work plans or sampling and analysis plans. If Respondents object to any other data relating to the RI/FS, Respondents will submit to EPA a report that identifies and explains their objections, describes the acceptable uses of the data, if any, and identifies any

limitations to the use of the data. The report must be submitted to EPA within fifteen (15) days of the monthly progress report containing the data.

93. If the site, or the off-site area that is to be used for access or is within the scope of the RI/FS, is owned in whole or in part by parties other than those bound by this Consent Order, Respondents will obtain, or use their best efforts to obtain, site access agreements from the present owner(s) within sixty (60) days of the effective date of this Consent Order. Such agreements will provide access for EPA, its contractors and oversight officials, the State and its contractors, and the Respondents or their authorized representatives, and such agreements will specify that Respondents are not EPA's representatives with respect to liability associated with site activities. Copies of such agreements will be provided to EPA prior to Respondents' initiation of field activities. Respondents' best efforts will include providing reasonable compensation to any off-site property owner. If access agreements are not obtained within the time referenced above, Respondents will immediately notify EPA of their failure to obtain access. EPA may obtain access for the Respondents, perform those tasks or activities with EPA contractors, or terminate the Consent Order in the event that Respondents cannot obtain access agreements. In the event that

EPA performs those tasks or activities with EPA contractors and does not terminate the Consent Order, Respondents will perform all other activities not requiring access to that site, and will reimburse EPA for all costs incurred in performing such activities. Respondents additionally will integrate the results of any such tasks undertaken by EPA into their reports and deliverables. Furthermore, the Respondents agree to indemnify the U.S. Government as specified in Section XXV of this Order. Respondents also will reimburse EPA for all costs and attorney fees incurred by the United States to obtain access for the Respondents pursuant to paragraph 114.

XV. DESIGNATED PROJECT COORDINATORS

94. Documents including reports, approvals, disapprovals, and other correspondence which must be submitted under this Consent Order, will be sent by certified mail, return receipt requested, to the following addressees or to any other addressees which the Respondents and EPA designate in writing:

(a) Documents to be submitted to EPA should be sent in triplicate to:

Gwendolyn Massenburg,
Remedial Project Manager
US EPA, Region 5
77 West Jackson Blvd.
Chicago, IL 60604

(b) Documents to be submitted to the Respondents should

be sent to [include number of copies]:

Name, Title,
Organization,
Street, City, State, Zip Code

95. On or before the effective date of this Consent Order, EPA and the Respondents will each designate their own Project Coordinator. Each Project Coordinator will be responsible for overseeing the implementation of this Consent Order. To the maximum extent possible, communications between the Respondents and EPA will be directed to the Project Coordinator by mail, with copies to such other persons as EPA, the State, and Respondents may respectively designate. Communications include, but are not limited to, all documents, reports, approvals, and other correspondence submitted under this Consent Order.

96. EPA and the Respondents each have the right to change their respective Project Coordinator. The other party must be notified in writing at least ten (10) days prior to the change.

97. EPA's Project Coordinator will have the authority lawfully vested in a Remedial Project Manager (RPM) and On-Scene Coordinator (OSC) by the NCP. In addition, EPA's Project Coordinator will have the authority, consistent with the NCP, to halt any work required by this Consent Order, and to take any necessary response action when she/he determines that conditions

at the site may present an immediate endangerment to public health or welfare or the environment. The absence of the EPA Project Coordinator from the area under study pursuant to this Consent Order will not be cause for the stoppage or delay of work.

98. EPA will arrange for a qualified person to assist in its oversight and review of the conduct of the RI/FS, as required by Section 104(a) of CERCLA, 42 U.S.C. § 9604(a). The oversight assistant may observe work and make inquiries in the absence of EPA, but is not authorized to modify the work plan.

XVI. OTHER APPLICABLE LAWS

99. Respondents will comply with all laws that are applicable when performing the RI/FS. No local, state, or federal permit will be required for any portion of any action conducted entirely on-site, including studies, where such action is selected and carried out in compliance with Section 121 of CERCLA, 42 U.S.C. § 9621.

XVII. RECORD PRESERVATION

100. All records and documents in EPA's and Respondents' possession that relate in any way to the site will be preserved during the conduct of this Consent Order and for a minimum of 10 years after commencement of construction of any remedial action. The Respondents will acquire and retain copies of all documents that relate to the site and are in the

possession of its employees, agents, accountants, contractors, or attorneys. After this 10 year period, the Respondents will notify EPA at least ninety (90) days before the documents are scheduled to be destroyed. If EPA requests that the documents be saved, the Respondents will, at no cost to EPA, give EPA the documents or copies of the documents.

XVIII. DISPUTE RESOLUTION

101. Any disputes concerning activities or deliverables required under this Order, excluding the baseline risk assessment, for which dispute resolution has been expressly provided for, will be resolved as follows: If the Respondents object to any EPA notice of disapproval or requirement made pursuant to this Consent Order, Respondents will notify EPA's Project Coordinator in writing of their objections within fourteen (14) days of receipt of the disapproval notice or requirement. Respondents' written objections will define the dispute, state the basis of Respondents' objections, and be sent certified mail, return receipt requested. EPA and the Respondents then have an additional fourteen (14) days to reach agreement. If an agreement is not reached within fourteen (14) days, Respondents may request a determination by EPA's Director, Superfund Division. The Director's determination is EPA's final decision. Respondents will proceed in accordance with EPA's final decision regarding the matter in dispute, regardless of

whether Respondents agree with the decision. If the Respondents do not agree to perform or do not actually perform the work in accordance with EPA's final decision, EPA reserves the right in its sole discretion to conduct the work itself, to seek reimbursement from the Respondents, to seek enforcement of the decision, to seek stipulated penalties, and/or to seek any other appropriate relief.

102. Respondents are not relieved of their obligations to perform and conduct activities and submit deliverables on the schedule set forth in the work plan, while a matter is pending in dispute resolution. The invocation of dispute resolution does not stay stipulated penalties under this Order.

XIX. DELAY IN PERFORMANCE/STIPULATED PENALTIES

103. For each day that the Respondents fail to complete a deliverable in a timely manner or fail to produce a deliverable of acceptable quality, or otherwise fail to perform in accordance with the requirements of this Order, Respondents will be liable for stipulated penalties. Penalties begin to accrue on the day that performance is due or a violation occurs, and extend through the period of correction. Where a revised submission by Respondents is required, stipulated penalties will continue to accrue until a satisfactory deliverable is produced. EPA will provide written notice for violations that are not based on timeliness; nevertheless, penalties will accrue from

the day a violation commences. Payment will be due within thirty (30) days of receipt of a demand letter from EPA.

104. Respondents will pay interest on the unpaid balance, which will begin to accrue at the end of the 30-day period, at the rate established by the Department of Treasury pursuant to 30 U.S.C. § 3717. Respondents will further pay a handling charge of 1 percent, to be assessed at the end of each 31 day period, at a rate established by the Department of Treasury pursuant to 30 U.S.C. § 3717. Respondents will further pay and a six percent (6%) per annum penalty, to be assessed if the penalty is not paid in full within ninety (90) days after it is due.

105. Respondents must make all payments by certified check payable to "Hazardous Substances Superfund" and forward the check to:

U.S. Environmental Protection Agency, Region 5
Superfund Accounting
P.O. Box 70753
Chicago, Illinois 60673

Checks must identify the name of the site, the site identification number, the account number, and the title of this Order. A copy of the check and/or transmittal letter must be forwarded to the EPA Project Coordinator.

106. For the following major deliverables, stipulated penalties will accrue in the amount of \$2,500 per day, per violation, for the first seven days (7) of noncompliance; \$5,000

per day, per violation, for the 8th through 14th day of noncompliance; \$10,000 per day, per violation, for the 15th day through the 30th day; and \$27,500 per day per violation for all violations lasting beyond thirty (30) days.

- 1) An original and any revised work plan.
- 2) An original and any revised sampling and analysis plan.
- 3) An original and any revised remedial investigation report.
- 4) An original and any revised treatability testing work plan.
- 5) An original and any revised treatability study sampling and analysis plan.
- 6) An original and any revised feasibility study report.

107. For the following interim deliverables, stipulated penalties will accrue in the amount of \$2,500 per day, per violation, for the first week of noncompliance; \$5,000 per day, per violation, for the 8th through 14th day of noncompliance; \$10,000 per day, per violation, for the 15th day through the 30th day of noncompliance; and \$27,500 per day per violation for all violations lasting beyond 30 days.

- 1) Technical memorandum on modeling of site characteristics.
- 2) Preliminary site characterization summary.
- 3) Summary of RI data.
- 4) Identification of candidate technologies memorandum.
- 5) Treatability testing statement of work.
- 6) Treatability study evaluation report.
- 7) Memorandum on remedial action objectives.
- 8) Memoranda on development and preliminary screening of alternatives, assembled alternatives screening results, and final screening.
- 9) Comparative analysis report.

108. For the monthly progress reports, stipulated penalties will accrue in the amount of \$2,500 per day, per violation, for the first week of noncompliance; \$5,000 per day, per violation, for the 8th through 14th day of noncompliance; \$10,000 per day, per violation, for the 15th day through the 30th day; and \$27,000 per day, per violation, for all violations lasting beyond thirty (30) days.

109. Respondents may dispute EPA's right to the stated amount of penalties by invoking the dispute resolution procedures under Section XVII herein. Penalties will accrue but need not be paid during the dispute resolution period. If Respondents do not prevail upon resolution, all penalties will be due to EPA within thirty (30) days of resolution of the dispute. If Respondents prevail upon resolution, no penalties will be paid.

110. In the event that EPA provides for corrections to be reflected in the next deliverable and does not require resubmission of that deliverable, stipulated penalties for that interim deliverable will cease to accrue on the date of such decision by EPA.

111. The stipulated penalties provisions do not preclude EPA from pursuing any other remedies or sanctions which are available to EPA because of the Respondents' failure to comply with this Consent Order, including but not limited to

conduct of all or part of the RI/FS by EPA. Payment of stipulated penalties does not alter Respondents' obligation to complete performance under this Consent Order.

XX. FORCE MAJEURE

112. "Force majeure", for purposes of this Consent Order, is defined as any event arising from causes entirely beyond the control of the Respondents and of any entity controlled by Respondents, including their contractors and subcontractors, that delays the timely performance of any obligation under this Consent Order notwithstanding Respondents' best efforts to avoid the delay. The requirement that the Respondents exercise "best efforts to avoid the delay" includes using best efforts to anticipate any potential force majeure event and best efforts to address the effects of any potential force majeure event (1) as it is occurring and (2) following the potential force majeure event, such that the delay is minimized to the greatest extent practicable. Examples of events that are not force majeure events include, but are not limited to, increased costs or expenses of any work to be performed under this Order or the financial difficulty of Respondents to perform such work..

113. If any event occurs or has occurred that may delay the performance of any obligation under this Order, whether or not caused by a force majeure event, Respondents will notify by

telephone the Remedial Project Manager or, in his or her absence, the Director of the Superfund Division, EPA Region 5, within 48 hours of when the Respondents knew or should have known that the event might cause a delay. Within five (5) business days thereafter, Respondents will provide in writing the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; a schedule for implementation of any measures to be taken to mitigate the effect of the delay; and a statement as to whether, in the opinion of Respondents, such event may cause or contribute to an endangerment to public health, welfare or the environment. Respondents will exercise best efforts to avoid or minimize any delay and any effects of a delay. Failure to comply with the above requirements will preclude Respondents from asserting any claim of force majeure.

114. If EPA agrees that the delay or anticipated delay is attributable to force majeure, the time for performance of the obligations under this Order that are directly affected by the force majeure event will be extended by agreement of the parties, pursuant to section XXVI of this Order, for a period of time not to exceed the actual duration of the delay caused by the force majeure event. An extension of the time for performance of the obligation directly affected by the force majeure event will not, of itself, extend the time for

performance of any subsequent obligation.

115. If EPA does not agree that the delay or anticipated delay has been or will be caused by a force majeure event, or does not agree with Respondents on the length of the extension, the issue will be subject to the dispute resolution procedures set forth in Section XVII of this Order. In any such proceeding, to qualify for a force majeure defense, Respondents will have the burden of demonstrating by a preponderance of the evidence that the delay or anticipated delay has been or will be caused by a force majeure event, that the duration of the delay was or will be warranted under the circumstances, that Respondents did exercise or are exercising due diligence by using their best efforts to avoid and mitigate the effects of the delay, and that Respondents complied with the requirements of paragraph 113.

116. Should Respondents carry the burden set forth in paragraph 115, the delay at issue will be deemed not to be a violation of the affected obligation of this Consent Order.

XXI. REIMBURSEMENT OF PAST COSTS

117. Within fifteen (15) days of the effective date of this Order, Respondents will remit a certified or cashiers check to EPA in the amount of **\$408,013.80** as demanded in the attached RI/FS Special Notice Letter dated June 22, 2001 together with interest that has accrued thereon at the rate of interest

specified for the Hazardous Substances Superfund under CERCLA Section 107(a), 42 U.S.C. § 9607(a), for all past response costs incurred by the United States at this site to date.

118. Checks must be made payable to the "Hazardous Substances Superfund" and must include the name of the Site, the Site identification number, the operable unit, if any, the Regional Lock Box Number account number and the title of this Order. Checks must be forwarded to:

U.S. Environmental Protection Agency
Superfund Accounting
P.O. Box 70753
Chicago, Illinois 60673

119. A copy of the check must be sent simultaneously to the EPA Project Coordinator.

XXII. REIMBURSEMENT OF RESPONSE AND OVERSIGHT COSTS

120. Following the issuance of this Consent Order, EPA will submit to the Respondents on a periodic basis an accounting of all response costs including oversight costs incurred by the U.S. Government with respect to this RI/FS. Response costs may include, but are not limited to, costs incurred by the U.S. Government in overseeing Respondents' implementation of the requirements of this Order and activities performed by the government as part of the RI/FS and community relations, including any costs incurred while obtaining access. Costs will include all direct and indirect costs, including, but not limited to, time and travel costs of EPA personnel and

associated indirect costs, contractor costs, cooperative agreement costs, compliance monitoring, including the collection and analysis of split samples, inspection of RI/FS activities, site visits, discussions regarding disputes that may arise as a result of this Consent Order, review and approval or disapproval of reports, costs of performing baseline risk assessment, and costs of redoing any of Respondents' tasks. Any necessary summaries, including, but not limited to, EPA's certified Agency Financial Management Systems summary data (itemized cost summaries), or such other summary as certified by EPA, will serve as basis for payment demands.

121. Respondent will, within thirty (30) days of receipt of each accounting, remit a certified or cashier's check for the amount of those costs. Interest will accrue from the later of: the date payment of a specified amount is demanded in writing; or the date of the expenditure. The interest rate is the rate of interest on investments for the Hazardous Substances Superfund in Section 107(a) of CERCLA, 42 U.S.C. § 9607(a).

122. Certified checks must be made payable to the Hazardous Substances Superfund and must include the name of the site, the site identification number, the account number and the title of this Order. Checks must be forwarded to:

U.S. Environmental Protection Agency
Superfund Accounting
P.O. Box 70753
Chicago, Illinois 60653

123. Copies of the transmittal letter and check must be sent simultaneously to the EPA Project Coordinator.

124. Respondents agree to limit any disputes concerning costs to accounting errors and the inclusion of costs outside the scope of this Consent Order. Respondents will identify any contested costs and the basis of their objection. All undisputed costs will be remitted by Respondents in accordance with the schedule set forth above. Disputed costs will be paid by Respondents into an escrow account while the dispute is pending. Respondents bear the burden of establishing an EPA accounting error or the inclusion of costs outside the scope of this Consent Order.

XXIII. RESERVATIONS OF RIGHTS AND REIMBURSEMENT OF OTHER COSTS

125. EPA reserves the right to bring an action against the Respondents under Section 107 of CERCLA, 42 U.S.C.

§ 9607(a), for recovery of all response costs including oversight costs, incurred by the United States at the site that are not reimbursed by the Respondents, any costs incurred in the event that EPA performs the RI/FS or any part thereof, and any future costs incurred by the United States in connection with response activities conducted under CERCLA at this site.

126. EPA reserves the right to bring an action against Respondents to enforce the past costs and response and oversight cost reimbursement requirements of this Consent Order, to

collect stipulated penalties assessed pursuant to Section XVIII of this Consent Order, and to seek penalties pursuant to Section 109 of CERCLA, 42 U.S.C. § 9609.

127. Except as expressly provided in this Order, each party reserves all rights and defenses it may have. Nothing in this Consent Order will affect EPA's removal authority or EPA's response or enforcement authorities including, but not limited to, the right to seek injunctive relief, stipulated penalties, statutory penalties, and/or punitive damages.

128. Following satisfaction of the requirements of this Consent Order, Respondents will have resolved their liability to EPA for the work performed by Respondents pursuant to this Consent Order. Respondents are not released from liability, if any, for any response actions taken beyond the scope of this Order regarding removals, other operable units, remedial design/remedial action of this operable unit, or activities arising pursuant to Section 121(c) of CERCLA, 42 U.S.C. § 9607(a).

XXIV. DISCLAIMER

129. By signing this Consent Order and taking actions under this Order, the Respondents do not necessarily agree with EPA's Findings of Fact and Conclusions of Law. Furthermore, the participation of the Respondents in this Order will not be considered an admission of liability and is not admissible in

evidence against the Respondents in any judicial or administrative proceeding other than a proceeding by the United States, including EPA, to enforce this Consent Order or a judgment relating to it. Respondents retain their rights to assert claims against other potentially responsible parties at the site. However, the Respondents agree not to contest the validity or terms of this Order, or the procedures underlying or relating to it in any action brought by the United States, including EPA, to enforce its terms.

XXV. OTHER CLAIMS

130. In entering into this Order, Respondents waive any right to seek reimbursement under Section 106(b) of CERCLA. Respondents also waive any right to present a claim under Section 111 or 112 of CERCLA. This Order does not constitute any decision on preauthorization of funds under Section 111(a)(2) of CERCLA. Respondents further waive all other statutory and common law claims against EPA, including, but not limited to, contribution and counterclaims, relating to or arising out of conduct of the RI/FS.

131. Nothing in this Order will constitute or be construed as a release from any claim, cause of action or demand in law or equity against any person, firm, partnership, subsidiary or corporation not a signatory to this Consent Order for any liability it may have arising out of or relating in any

way to the generation, storage, treatment, handling, transportation, release, or disposal of any hazardous substances, pollutants, or contaminants found at, taken to, or taken from the site.

132. Respondents will bear their own costs and attorneys fees.

XXVI. FINANCIAL ASSURANCE, INSURANCE, AND INDEMNIFICATION

133. Respondents will establish and maintain a financial instrument or trust account or other financial mechanism acceptable to EPA, funded sufficiently to perform the work and any other obligations required under this Consent Order, including a margin for cost overruns. Within 15 days after the effective date of this Consent Order, Respondents will fund the financial instrument or trust account sufficiently to perform the work required under this Consent Order projected for the period beginning with the effective date of the Order through September 30, 2002. Beginning October 1, 2002, and on or before the 15th calendar day of each calendar year quarter thereafter, Respondent(s) will fund the financial instrument or trust account sufficiently to perform the work and other activities required under this Order projected for the succeeding calendar year quarter.

134. If at any time the net worth of the financial instrument or trust account is insufficient to perform the work

and other obligations under the Order for the upcoming quarter, Respondent(s) will provide written notice to EPA within seven (7) days after the net worth of the financial instrument or trust account becomes insufficient. The written notice will describe why the financial instrument or trust account is funded insufficiently and explain what actions have been or will be taken to fund the financial instrument or trust account adequately.

135. (a) Prior to commencement of any work under this Order, Respondents will secure, and will maintain in force for the duration of this Order, and for two years after the completion of all activities required by this Consent Order, Comprehensive General Liability ("CGL") and automobile insurance, with limits of \$10 million dollars, combined single limit, naming as insured the United States. The CGL insurance will include Contractual Liability Insurance in the amount of \$1,000,000 per occurrence, and Umbrella Liability Insurance in the amount of \$2 million per occurrence.

(b) Respondents will also secure, and maintain in force for the duration of this Order and for two years after the completion of all activities required by this Consent Order the following:

i. Professional Errors and Omissions Insurance in the amount of \$1,000,000.00 per occurrence.

ii. Pollution Liability Insurance in the amount of \$1,000,000.00 per occurrence, covering as appropriate both general liability and professional liability arising from pollution conditions.

(c) For the duration of this Order, Respondents will satisfy, or will ensure that their contractors or subcontractors satisfy, all applicable laws and regulations regarding the provision of employer's liability insurance and workmen's compensation insurance for all persons performing work on behalf of the Respondents, in furtherance of this Order.

(d) If Respondents demonstrate by evidence satisfactory to EPA that any contractor or subcontractor maintains insurance equivalent to that described above, or insurance covering the same risks but in a lesser amount, then with respect to that contractor or subcontractor Respondent need provide only that portion of the insurance described above which is not maintained by the contractor or subcontractor.

(e) Prior to commencement of any work under this Order, and annually thereafter on the anniversary of the effective date of this Order, Respondents will provide to EPA certificates of such insurance and a copy of each insurance policy.

136. At least seven (7) days prior to commencing any work under this Consent Order, Respondents will certify to EPA

that the required insurance has been obtained by that contractor.

137. The Respondents agree to indemnify and hold the United States Government, its agencies, departments, agents, and employees harmless from any and all claims or causes of action arising from or on account of acts or omissions of Respondents, their employees, agents, servants, receivers, successors, or assignees, or any persons including, but not limited to, firms, corporations, subsidiaries and contractors, in carrying out activities under this Consent Order. The United States Government or any agency or authorized representative thereof will not be held as a party to any contract entered into by Respondents in carrying out activities under this Consent Order.

XXVII. EFFECTIVE DATE AND SUBSEQUENT MODIFICATION

138. The effective date of this Consent Order will be the date it is signed by EPA.

139. This Consent Order may be amended by mutual agreement of EPA and Respondents. Amendments will be in writing and will not be effective if signed by someone who does not have the authority to sign amendments to the Consent Order.

140. No informal advice, guidance, suggestions, or comments by EPA regarding reports, plans, specifications, schedules, and any other writing submitted by the Respondents will be construed as relieving the Respondents of their

obligation to obtain such formal approval as may be required by this Order. Any deliverables, plans, technical memoranda, reports (other than progress reports), specifications, schedules and attachments required by this Consent Order are, upon approval by EPA, incorporated into this Order.

XXVIII. TERMINATION AND SATISFACTION

141. This Consent Order will terminate when the Respondents demonstrate in writing and certify to the satisfaction of EPA that all activities required under this Consent Order, including any additional work, payment of past costs, response and oversight costs, and any stipulated penalties demanded by EPA, have been performed and EPA has approved the certification. This notice will not, however, terminate Respondents' obligation to comply with Sections XVI, XXI, and XXII of this Consent Order.

142. The certification will be signed by a responsible official representing each Respondent. Each representative will make the following attestation: "I certify that the information contained in or accompanying this certification is true, accurate, and complete." For purposes of this Consent Order, a responsible official is a corporate official who is in charge of a principal business function.

BY: _____
William Muno, Director
Superfund Division, Region 5
U.S. Environmental Protection Agency.

DATE: _____

IN RE: CHEMICAL RECOVERY SYSTEMS, INC, ELYRIA OHIO

DOCKET NO.:

Administrative Order on Consent
For Remedial Investigation/Feasibility Study

BY: _____ DATE: _____

Title

IN RE:CHEMICAL RECOVERY SYSTEMS, INC, ELYRIA OHIO

DOCKET NO.:

Administrative Order on Consent
For Remedial Investigation/Feasibility Study

BY: _____ DATE: _____

Title

STATEMENT OF WORK
FOR PRP-CONDUCTED
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
AT
CHEMICAL RECOVERY SYSTEMS INC.
ELYRIA, OHIO

The purpose of this remedial investigation/feasibility study (RI/FS) is to investigate the nature and extent of contamination for the Chemical Recovery Systems Inc. (Site), as generally described at paragraph 2, Section I of the Administrative Order by Consent (AOC) and develop and evaluate potential remedial alternatives. It is also the purpose of this RI/FS to require the Respondents to gather sufficient data, samples and other information, in consultation with the Trustees, to enable the completion of an injury determination and other appropriate natural resource damage assessment activities consistent with 15 CFR Part 990 and 43 CFR Part 11. The data, samples and other information gathered to enable the completion of an injury determination and other appropriate natural resource damage assessment activities must be used to coordinate remedial activity and the restoration, rehabilitation or replacement of, or compensation for, injured natural resources. The RI and FS are interactive and must be conducted concurrently so that the data collected in the RI influences the development of remedial alternatives in the FS, which in turn affects the data needs and the scope of treatability studies.

The Respondents must conduct this RI/FS and must produce draft and final RI/FS reports that are in accordance with this statement of work, the Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA (U.S. EPA, Office of Emergency and Remedial Response, October 1988), and any other guidances that U.S. EPA and Ohio EPA use in conducting a RI/FS (a list of the primary guidances are attached), as well as any additional requirements in the Administrative Order on Consent. The RI/FS Guidance describes the report format and the required report content. The Respondents must furnish all necessary personnel, materials, and services needed, or incidental to, performing the RI/FS, except as otherwise specified in the administrative order.

The Respondents must provide U.S. EPA and Ohio EPA with a copy of all deliverables or documents required as part of this statement of work for approval. U.S. EPA in consultation with the Ohio EPA will be responsible for the selection of a site remedy and will document this selection in a Record of Decision (ROD). The remedial action alternative selected by U.S. EPA must meet the cleanup standards specified in CERCLA Section 121. That is, the selected remedial action will be protective of human health and the environment, will be in compliance with, or

include a waiver of, applicable or relevant and appropriate requirements of other laws, will be cost-effective, will utilize permanent solutions and alternative treatment technologies or resource recovery technologies, to the maximum extent practicable, and will address the statutory preference for treatment as a principal element. The final RI/FS report and the baseline risk assessment, as adopted by U.S. EPA and Ohio EPA, will, with the administrative record, form the basis for the selection of the site's remedy and will provide the information necessary to support the development of the ROD.

As specified in CERCLA Section 104(a)(1), as amended by SARA, U.S. EPA and Ohio EPA will provide oversight of the Respondent's activities throughout the RI/FS, including all field sampling activities. The Respondents must support U.S. EPA's and Ohio EPA's initiation and conduct of activities related to the implementation of oversight activities. Oversight activities will be coordinated between U.S. EPA, Ohio EPA, and other agencies.

All correspondence, communication, and submittals from Respondents shall be directed to the following and additional individuals they identify:

Gwendolyn Massenburg
Remedial Project Manager
United States Environmental Protection Agency
77 West Jackson Blvd., Mailcode SR-6J
Chicago, Illinois 60604-3590
Phone (312) 886-0983
FAX (312) 886-4071
Email "Massenburg.Gwendolyn@epa.gov"

Lawrence Antonelli
Ohio Environmental Protection Agency
Northeast District Office
2110 East Aurora Road
Twinsburg, Ohio 44087
Phone (330) 963-1127
FAX (330) 487-0769
Email "larry.antonelli@epa.state.oh.us"

A. TASK I - SCOPING (RI/FS Guidance, Chapter 2)

Scoping is the initial planning process of the RI/FS and is initiated by U.S. EPA and Ohio EPA prior to issuing special notice. During this time, the site-specific objectives of the RI/FS, including the preliminary remediation goals (PRGs), are determined by U.S. EPA. Scoping is therefore initiated prior to negotiations between the PRPs, U.S. EPA and Ohio EPA, and is continued, repeated as necessary, and refined throughout the

RI/FS process. In addition to developing the site specific objectives of the RI/FS, U.S. EPA will determine a general management approach for the site. Consistent with the general management approach, the specific project scope will be planned by the Respondent, U.S. EPA and Ohio EPA. The Respondents must document the specific project scope in a work plan. Because the work required to perform a RI/FS is not fully known at the onset, and is phased in accordance with a site's complexity and the amount of available information, it may be necessary to modify the work plan during the RI/FS to satisfy the objectives of the study.

The objectives for the Site located in the State of Ohio have been determined preliminarily, based on available information, to be the following:

- Prevention or abatement of actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances pollutants or contaminants;
- Prevention or abatement of actual or potential contamination of drinking water supplies or sensitive ecosystems;
- Treatment or elimination of high levels of hazardous substances, pollutants, or contaminants in soils or sediments largely at or near the surface that may migrate;
- Mitigation or abatement of other situations or factors that may pose threats to public health, welfare, or the environment.

The strategy for the general management of the Site will include the following:

- a. Conduct a remedial investigation to determine fully the nature and extent of the release or threatened release of hazardous substances, pollutants, or contaminants from the Site;
- b. Perform a feasibility study to identify and evaluate alternatives for the appropriate extent of remedial action to prevent or mitigate the migration or the release or threatened release of hazardous substances, pollutants, or contaminants from the site; and
- c. Conduct removal actions to address priority areas pursuant to the AOC, any amendments thereof, subsequently issued Orders, and the Scope of Work for Engineering Evaluation and Cost Analysis.
- d. Gather sufficient data, samples and other information, in consultation with Trustees, to enable the completion of an injury determination and other appropriate natural resource damage assessment activities consistent with 15 CFR Part 990 and 43 CFR

Part 11. The data, samples and other information gathered to enable the completion of an injury determination and other appropriate natural resource damage assessment activities will be used to coordinate remedial activity and the restoration, rehabilitation or replacement of, or compensation for, injured natural resources.

When scoping the specific aspects of a project, the Respondents must meet with U.S. EPA and Ohio EPA, and the Trustees, to discuss all project planning decisions and special concerns associated with the site. The following activities shall be performed by the Respondents as a function of the project planning process.

a. Site Background (2.2)

The Respondents must gather and analyze the existing site background information and will conduct a site visit to assist in planning the scope of the RI/FS.

Collect and analyze existing data and document the need for additional data (2.2.2; 2.2.6; 2.2.7)

Before planning RI/FS activities, all existing site data must be thoroughly compiled and reviewed by the Respondents. Specifically, this will include presently available data relating to the varieties and quantities of hazardous substances at the site, and past disposal practices. This will also include results from any previous sampling events that may have been conducted. The Respondents must refer to Table 2-1 of the RI/FS Guidance for a comprehensive list of data collection information sources. This information will be utilized in determining additional data needed to characterize the site, better define potential applicable or relevant and appropriate requirements (ARARs), and develop a range of preliminarily identified remedial alternatives. Data Quality Objectives (DQOs) will be established subject to U.S. EPA approval which specify the usefulness of existing data. Decisions on the necessary data and DQOs will be made by U.S. EPA.

Conduct Site Visit

The Respondents will conduct a site visit during the project scoping phase to assist in developing a conceptual understanding of sources and areas of contamination as well as potential exposure pathways and receptors at the site. During the site visit the Respondents must observe the site's physiography, hydrology, geology, and demographics, as well as natural resource, ecological and cultural features. This information will be utilized to better scope the project and to determine the extent of additional data

necessary to characterize the site, better define potential ARARs, and narrow the range of preliminarily identified remedial alternatives.

b. Project Planning (2.2)

Once the Respondents have collected and analyzed existing data and conducted a site visit, the specific project scope will be planned. Project planning activities include those tasks described below as well as identifying data needs, developing a work plan, designing a data collection program, and identifying health and safety protocols. These tasks are described in Section c. of this task since they result in the development of specific required deliverables.

Refine and document preliminary remedial action objectives and alternatives (2.2.3)

Once existing site information has been analyzed and an understanding of the potential site risks has been determined by Respondents, U.S. EPA and Ohio EPA, the Respondents will review and, if necessary, refine the remedial action objectives that have been identified by U.S. EPA for each actually or potentially contaminated medium. The revised remedial action objectives must be documented in a technical memorandum and are subject to U.S. EPA approval. The Respondents must then identify a preliminary range of broadly defined potential remedial action alternatives and associated technologies. The range of potential alternatives must encompass, where appropriate, alternatives in which treatment significantly reduces the toxicity, mobility, or volume of the waste; alternatives that involve containment with little or no treatment; and a no-action alternative.

Document the need for treatability studies (2.2.4)

If remedial actions involving treatment have been identified by the Respondents or U.S. EPA, treatability studies will be required except where the Respondents can demonstrate to U.S. EPA's satisfaction that they are not needed. Where treatability studies are needed, initial treatability testing activities (such as research and study design) will be planned to occur concurrently with site characterization activities (see Tasks 3 and 5).

Begin preliminary identification of Potential ARARs (2.2.5)

The Respondents will conduct a preliminary identification of potential state and federal ARARs (chemical-specific, location-specific and action-specific) to assist in the refinement of remedial action objectives, and the initial

identification of remedial alternatives and ARARs associated with particular actions. ARAR identification will continue as site conditions, contaminants, and remedial action alternatives are better defined.

c. Scoping Deliverables (2.3)

At the conclusion of the project planning phase, the Respondents must submit a RI/FS work plan, a sampling and analysis plan, and a site health and safety plan. The RI/FS work plan and sampling and analysis plan must be reviewed and approved by U.S. EPA prior to the initiation of field activities.

RI/FS Work Plan (2.3.1)

A work plan documenting the decisions and evaluations completed during the scoping process must be submitted to U.S. EPA and Ohio EPA for review and to U.S. EPA for approval. The work plan must be developed in conjunction with the sampling and analysis plan and the site health and safety plan, although each plan may be delivered under separate cover. The work plan must include a comprehensive description of the work to be performed, including the methodologies to be utilized, as well as a corresponding schedule for completion. In addition, the work plan must include the rationale for performing the required activities. Specifically, the work plan must present a statement of the problem(s) and potential problem(s) posed by the site and the objectives of the RI/FS. Furthermore, the plan must include a site background summary setting forth the site description including the geographic location of the site, and to the extent possible, a description of the site's physiography, hydrology, geology, demographics, ecological, cultural and natural resource features; a synopsis of the site history and a description of previous responses that have been conducted at the site by local, state, federal, or private parties; a summary of the existing data in terms of physical and chemical characteristics of the contaminants identified, and their distribution among the environmental media at the site, and a summary of all information regarding natural resources at risk to injury from the release of oil and hazardous substances at or from the Site and any ascertainable damage(s) to natural resources. The plan must recognize Respondent's preparation of the baseline human health and ecological risk assessment. In addition, the plan must include a description of the site management strategy developed by U.S. EPA during scoping; a preliminary identification of remedial alternatives and data needs for evaluation of remedial alternatives. The plan must reflect coordination with treatability study requirements (see Tasks 1 and 4). It must include a process for and manner of

identifying Federal and state ARARs (chemical-specific, location-specific and action-specific).

Finally, the major part of the work plan is a detailed description of the tasks to be performed, information needed for each task and for the baseline human health and ecological risk assessment, information to be produced during and at the conclusion of each task, and a description of the work products that must be submitted to U.S. EPA and Ohio EPA. This includes the deliverables set forth in the remainder of this statement of work; a schedule for each of the required activities which is consistent with the RI/FS guidance; and a project management plan, including a data management plan (e.g., requirements for project management systems and software, minimum data requirements, data format and backup data management), monthly reports to U.S. EPA and Ohio EPA and meetings and presentations to U.S. EPA and Ohio EPA at the conclusion of each major phase of the RI/FS. The Respondents must refer to Appendix B of the RI/FS Guidance for a comprehensive description of the contents of the required work plan. The RI/FS work plan must also require the Respondents to gather sufficient data, samples and other information, in consultation with the Trustees, to enable the completion of an injury determination and other appropriate natural resource damage assessment activities consistent with 15 CFR Part 990 and 43 CFR Part 11. The data, samples and other information gathered to enable the completion of an injury determination and other appropriate natural resource damage assessment activities must be used to coordinate remedial activity and the restoration, rehabilitation or replacement of, or compensation for, injured natural resources. Because of the unknown nature of the site and iterative nature of the RI/FS, additional data requirements and analyses may be identified throughout the process. The Respondents must submit a technical memorandum documenting the need for additional data, and identifying the DQOs whenever such requirements are identified. In any event, the Respondents are responsible for fulfilling additional data and analysis needs identified by U.S. EPA and Ohio EPA consistent with the general scope and objectives of this RI/FS.

Sampling and Analysis Plan (2.3.2)

The Respondents must prepare a sampling and analysis plan (SAP) to ensure that sample collection and analytical activities are conducted in accordance with technically acceptable protocols and that the data meet DQOs. The SAP provides a mechanism for planning field activities and consists of a field sampling plan (FSP) and a quality assurance project plan (QAPP).

The FSP must define in detail the sampling and data-gathering methods that must be used on the project. It must include sampling objectives, sample location and frequency, sampling equipment and procedures, and sample handling and analysis. Respondents must include a schedule which identifies the timing for the initiation and completion of all task to be completed as a part of this FSP.

The QAPP must describe the project objectives and organization, functional activities, and quality assurance and quality control (QA/QC) protocols that must be used to achieve the desired DQOs. The DQOs must at a minimum reflect use of analytic methods to identifying contamination and remediating contamination consistent with the levels for remedial action objectives identified in the National Contingency Plan, 59 FR 47384, September 15, 1994. In addition, the QAPP must address sampling procedures, sample custody, analytical procedures, and data reduction, validation, reporting and personnel qualifications. Respondents must also ensure provision of analytical tracking information consistent with the U.S. EPA's Office of Solid Waste and Emergency Response (OSWER) Directive No. 9240.0-2B Extending the Tracking of Analytical Services to PRP-Lead Superfund Sites. Field personnel must be available for U.S. EPA and Ohio EPA QA/QC training and orientation where applicable.

The Respondents must demonstrate, in advance, to U.S. EPA's satisfaction, that each laboratory they may use is qualified to conduct the proposed work. This includes use of methods and analytical protocols for the chemicals of concern in the media of interest within detection and quantification limits consistent with both QA/QC procedures and DQOs approved in the QAPP for the site by U.S. EPA. The laboratory must have and follow an approved QA program. If a laboratory not in the Contract Laboratory Program (CLP) is selected, methods consistent with CLP methods that would be used at this site for the purposes proposed and QA/QC procedures approved by U.S. EPA must be used. If the laboratory is not in the CLP program, a laboratory QA program must be submitted for U.S. EPA and Ohio EPA review and U.S. EPA approval. U.S. EPA may require that the Respondents submit detailed information to demonstrate that the laboratory is qualified to conduct the work, including information on personnel qualifications, equipment and material specifications. The Respondents must provide assurances that U.S. EPA and Ohio EPA have access to laboratory personnel, equipment and records for sample collection, transportation and analysis. Upon request by U.S. EPA, Respondents must allow the U.S. EPA or its authorized representatives to take split and/or duplicate samples of any samples collected by Respondents or their contractors or agents.

Site Health and Safety Plan (2.3.3)

A health and safety plan must be prepared in conformance with the Respondent's health and safety program, and in compliance with the Occupational Safety and Health Administration (OSHA) regulations and protocols outlined in Title 29 of the Code of Federal Regulations (C.F.R.), Part 1910. The health and safety plan must include the 11 elements described in the RI/FS Guidance, such as a health and safety risk analysis, a description of monitoring and personal protective equipment, medical monitoring, and site control. It should be noted that U.S. EPA does not "approve" the Respondent's health and safety plan, but rather U.S. EPA and Ohio EPA review it to ensure that all necessary elements are included, and that the plan provides for the protection of human health and the environment. The safety plan must, at a minimum, follow the U.S. EPA's guidance document Standard Operating Safety Guides, Publication 9285.1-03, PB92-963414, June 1992.

TASK 2 - COMMUNITY RELATIONS

The development and implementation of community relations activities are the responsibility of U.S. EPA. The critical community relations planning steps performed by U.S. EPA and Ohio EPA include conducting community interviews and developing a community relations plan. Although implementation of the community relations plan is the responsibility of U.S. EPA, the Respondents and the Trustees may assist by providing information regarding the site's history, participating in public meetings, by assisting in preparing fact sheets for distribution to the general public, or conducting other activities approved by U.S. EPA. Respondents and/or U.S. EPA will prepare two or more baseline human health and ecological risk assessment memoranda which will summarize the toxicity assessment and exposure assessment components of the baseline human health and ecological risk assessment. U.S. EPA will make these memoranda available to all interested parties for comment and place them in the Administrative Record. (U.S. EPA is not required, however, to formally respond to significant comments except during the formal public comment period on the proposed plan after the RI/FS.) The extent of PRP involvement in community relations activities is left to the discretion of U.S. EPA. The Respondents' community relations responsibilities, if any, shall be specified in the community relations plan. All PRP-conducted community relations activities will be subject to oversight by U.S. EPA.

TASK 3 - SITE CHARACTERIZATION (RI/FS Guidance, Chapter 3)

As part of the RI, the Respondents will perform the activities described in this task, including the preparation of a

site characterization summary and a RI/FS report. The RI conducted by Respondents will include an investigation which focuses on the segment of the East Branch of the Black River adjacent to Chemical Recovery Systems, Inc. The overall objective of site characterization is to describe areas of a site that may pose a threat to human health or the environment. This is accomplished by first determining a site's physiography, geology, and hydrology. Surface and subsurface pathways of migration must be defined. The Respondents must identify the sources of contamination and define the nature, extent, and volume of the sources of contamination, including their physical and chemical constituents as well as their concentrations at incremental locations to background in the affected media. The Respondents must also investigate the extent of migration of this contamination as well as its volume and any changes in its physical or chemical characteristics, to provide for a comprehensive understanding of the nature and extent of contamination at the site. Using this information, contaminant fate and transport is then determined and projected.

During this phase of the RI/FS, the work plan, SAP, and health and safety plan are implemented. Field data are collected and analyzed to provide the information required to accomplish the objectives of the study. The Respondents must notify U.S. EPA and Ohio EPA at least two weeks in advance of the field work regarding the planned dates for any field activities including, but not limited to, ecological field surveys, field lay out of the sampling grid, excavation, installation of wells, initiating sampling, installation and calibration of equipment, pump tests, and initiation of analysis and other field investigation activities. The Respondents must demonstrate that the laboratory and type of laboratory analyses that will be utilized during site characterization meets the specific QA/QC requirements and the DQOs of the site investigation as specified in the SAP. In view of the unknown site conditions, activities are often iterative, and to satisfy the objectives of the RI/FS it may be necessary for the Respondents to supplement the work specified in the initial work plan. In addition to the deliverables below, the Respondents must provide a monthly progress report and participate in meetings at major points in the RI/FS.

a. Field Investigation (3.2)

The field investigation includes the gathering of data to define site physical and biological characteristics, sources of contamination, and the nature and extent of contamination at the site. These activities must be performed by the Respondents in accordance with the work plan and SAP. At a minimum, this shall address the following:

Implement and document field support activities (3.2.1)

The Respondents must initiate field support activities following approval of the work plan and SAP. Field support activities may include obtaining access to the site, scheduling, and procuring equipment, office space, laboratory services, and/or contractors. The Respondents must notify U.S. EPA and Ohio EPA at least two weeks prior to initiating field support activities so that U.S. EPA and Ohio EPA may adequately schedule oversight tasks. The Respondents must also notify U.S. EPA and Ohio EPA in writing upon completion of field support activities.

Investigate and define site physical and biological characteristics (3.2.2)

The Respondents must collect data on the physical and biological characteristics of the site and its surrounding areas including the physiography, geology, and hydrology, and specific physical characteristics identified in the work plan. This information must be ascertained through a combination of physical measurements, observations, and sampling efforts and must be utilized to define potential transport pathways and human and ecological receptor populations. In defining the site's physical characteristics the Respondents must also obtain sufficient engineering data including, but not limited to pumping characteristics for the projection of contaminant fate and transport, and development and screening of remedial action alternatives, including information to assess treatment technologies.

Define sources of contamination (3.2.3)

The Respondents must locate each source of contamination. For each location, the areal extent and depth of contamination must be determined by sampling at incremental depths on a sampling grid, as required by U.S. EPA. The physical characteristics and chemical constituents and their concentrations must be determined for all known and discovered sources of contamination. The Respondents shall conduct sufficient sampling to define the boundaries of the contaminant sources to the level established in the QA/QC plan and DQOs.

Defining the source of contamination must include analyzing the potential for contaminant release (e.g., long term leaching from soil), contaminant mobility and persistence, and characteristics important for evaluating remedial actions, including information to assess treatment technologies.

Describe the nature and extent of contamination (3.2.4)

The Respondents must gather information to describe the nature and extent of contamination and injury to natural resources as a final step during the field investigation. To describe the nature and extent of contamination and injury to natural resources, the Respondents must utilize the information on site physical and biological characteristics and sources of contamination to give a preliminary estimate of the contaminants that may have migrated. The Respondents must then implement an iterative monitoring program and any study program identified in the work plan or SAP such that by using analytical techniques sufficient to detect and quantify the concentration of contaminants, the migration of contaminants through the various media at the site can be determined. In addition, the Respondents must gather data for calculations of contaminant fate and transport. This process is continued until the area and depth of contamination are known to the level of contamination established in the QA/QC plan and DQOs. Respondents, U.S. EPA and Ohio EPA will use the information on the nature and extent of contamination to determine the level of risk presented by the site. Respondents must use this information to help to determine aspects of the appropriate remedial action alternatives to be evaluated.

b. Data Analyses (3.4)

Evaluate site characteristics (3.4.1)

The Respondents must analyze and evaluate the data to describe: (1) site physical and biological characteristics, (2) contaminant source characteristics, (3) nature and extent of contamination and (4) contaminant fate and transport. Results of the site physical characteristics, source characteristics, and extent of contamination analyses are utilized in the analysis of contaminant fate and transport. The evaluation must include the actual and potential magnitude of releases from the sources, and horizontal and vertical spread of contamination as well as mobility and persistence of contaminants. Where modeling is appropriate, such models shall be identified to U.S. EPA and Ohio EPA in a technical memorandum prior to their use. All data and programming, including any proprietary programs, shall be made available to U.S. EPA and Ohio EPA together with a sensitivity analysis. The RI data shall be presented in a format (i.e., computer disc or equivalent) to facilitate U.S. EPA's and Ohio EPA's evaluation of the baseline human health and ecological risk assessment. The Respondents shall agree to discuss any data gaps identified by the U.S. EPA and then collect any data that is needed to complete the baseline human health and ecological risk

assessment. (See "Guidance for Data Useability in Risk Assessment - OSWER Directive # 9285.7-05 - October 1990.) Also, this evaluation shall provide any information relevant to site characteristics necessary for evaluation of the need for remedial action in the baseline human health and ecological risk assessment and for the development and evaluation of remedial alternatives. Analyses of data collected for site characterization must meet the DQOs developed in the QA/QC plan stated in the SAP (or revised during the RI).

c. Data Management Procedures (3.5)

The Respondents must consistently document the quality and validity of field and laboratory data compiled during the RI.

Document field activities (3.5.1)

Information gathered during site characterization must be consistently documented and adequately recorded by the Respondents in well maintained field logs and laboratory reports. The method(s) of documentation must be specified in the work plan and/or the SAP. Field logs must be utilized to document observations, measurements, and significant events that have occurred during field activities. Laboratory reports must document sample custody, analytical responsibility, analytical results, adherence to prescribed protocols, nonconformity events, corrective measures, and/or data deficiencies.

Maintain sample management and tracking (3.5.2; 3.5.3)

The Respondents must maintain field reports, sample shipment records, analytical results, and QA/QC reports to ensure that only validated analytical data are reported and utilized in the development and evaluation of remedial alternatives. Analytical results developed under the work plan will not be included in any site characterization reports unless accompanied by or cross-referenced to a corresponding QA/QC report. In addition, the Respondents must establish a data security system to safeguard chain-of-custody forms and other project records to prevent loss, damage, or alteration of project documentation.

d. Site Characterization Deliverables (3.7)

The Respondents must prepare the preliminary site characterization summary. The remedial investigation (RI) report must be prepared concurrently with the feasibility study (FS) report and submitted as a combined RI/FS report.

Preliminary Site Characterization Summary (3.7.2)

After completing field sampling and analysis, the Respondents must prepare a concise site characterization summary. This summary must review the investigative activities that have taken place, and describe and display site data documenting the location and characteristics of surface and subsurface features and contamination at the site including the affected medium, location, types, physical state, concentration of contaminants and quantity. In addition, the location, dimensions, physical condition and varying concentrations of each contaminant throughout each source and the extent of contaminant migration through each of the affected media and natural resources must be documented. The site characterization summary must provide U.S. EPA and Ohio EPA with a preliminary reference for evaluating the human health and ecological risk assessment, and evaluating the development and screening of remedial alternatives and the refinement and identification of ARARs.

TASK 4 - TREATABILITY STUDIES (RI/FS Manual, Chapter 5)

If determined to be necessary by U.S. EPA or the Respondents, treatability testing must be performed by the Respondents to assist in the detailed analysis of alternatives. In addition, if applicable, testing results and operating conditions must be used in the detailed design of the selected remedial technology. The following activities must be performed by the Respondent.

a. Determination of Candidate Technologies and of the Need for Testing (5.2; 5.4)

The Respondents must identify in a technical memorandum, subject to U.S. EPA and Ohio EPA review and U.S. EPA approval, candidate technologies for a treatability studies program as early as project planning (Task 1). The listing of candidate technologies must cover the range of technologies required for alternatives analysis (Task 6 a.) The specific data requirements for the testing program must be determined and refined during site characterization and the development and screening of remedial alternatives (Tasks 2 and 6, respectively).

Conduct literature survey and determine the need for treatability testing (5.2)

The Respondents must conduct a literature survey to gather information on performance, relative costs, applicability, removal efficiencies, operation and maintenance (O&M) requirements, and implementability of candidate

technologies. If practical candidate technologies have not been sufficiently demonstrated, or cannot be adequately evaluated for this site on the basis of available information, treatability testing must be conducted. Where it is determined by U.S. EPA that treatability testing is required, and unless the Respondents can demonstrate to U.S. EPA's satisfaction that they are not needed, the Respondents must submit a statement of work to U.S. EPA and Ohio EPA outlining the steps and data necessary to evaluate and initiate the treatability testing program.

Evaluate treatability studies (5.4)

Once a decision has been made to perform treatability studies, U.S. EPA will decide on the type of treatability testing to use (e.g., bench versus pilot). Because of the time required to design, fabricate, and install pilot scale equipment as well as perform testing for various operating conditions, the decision to perform pilot testing must be made as early in the process as possible to minimize potential delays of the FS. To assure that a treatability testing program is completed on time, and with accurate results, the Respondents must either submit a separate treatability testing work plan or an amendment to the original site work plan for U.S. EPA and Ohio EPA review and U.S. EPA approval.

b. Treatability Testing and Deliverables (5.5; 5.6; 5.8)

The deliverables that are required, in addition to the memorandum identifying candidate technologies, where treatability testing is conducted include a work plan, a sampling and analysis plan, and a final treatability evaluation report. U.S. EPA may also require a treatability study health and safety plan, where appropriate.

Treatability testing work plan (5.5)

The Respondents must prepare a treatability testing work plan or amendment to the original site work plan for U.S. EPA and Ohio EPA review and U.S. EPA approval describing the site background, remedial technology(ies) to be tested, test objectives, experimental procedures, treatability conditions to be tested, measurements of performance, analytical methods, data management and analysis, health and safety, and residual waste management. The DQOs for treatability testing must be documented as well. If pilot scale treatability testing is to be performed, the pilot-scale work plan must describe pilot plant installation and start-up, pilot plant operation and maintenance procedures,

operating conditions to be tested, a sampling plan to determine pilot plant performance, and a detailed health and safety plan. If testing is to be performed off-site, permitting requirements must be addressed.

Treatability study SAP (5.5)

If the original QAPP or FSP is not adequate for defining the activities to be performed during the treatability tests, a separate treatability study SAP or amendment to the original site SAP must be prepared by the Respondents for U.S. EPA and Ohio EPA review and U.S. EPA approval. Task 1, Item c. of this statement of work provides additional information on the requirements of the SAP.

Treatability study health and safety plan (5.5)

If the original health and safety plan is not adequate for defining the activities to be performed during the treatment tests, a separate or amended health and safety plan must be developed by the Respondent. Task 1, Item c. of this statement of work provides additional information on the requirements of the health and safety plan. U.S. EPA and Ohio EPA do not "approve" the treatability study health and safety plan.

Treatability study evaluation report (5.6)

Following completion of treatability testing, the Respondents must analyze and interpret the testing results in a technical report to U.S. EPA and Ohio EPA. Depending on the sequence of activities, this report may be a part of the RI/FS report or a separate deliverable. The report must evaluate each technology's effectiveness, implementability, cost and actual results as compared with predicted results. The report must also evaluate full scale application of the technology, including a sensitivity analysis identifying the key parameters affecting full-scale operation.

TASK 5 - DEVELOPMENT AND SCREENING OF Remedial Alternatives (RI/FS Manual, Chapter 4)

The development and screening of remedial alternatives is performed to develop an appropriate range of waste management options that must be evaluated. This range of alternatives must include as appropriate, options in which treatment is used to reduce the toxicity, mobility, or volume of wastes, but varying in the types of treatment, the amount treated, and the manner in which long-term residuals or untreated wastes are managed; options involving containment with little or no treatment; options involving both treatment and containment; and a no-action alternative. The following activities must be performed by the

Respondents as a function of the development and screening of remedial alternatives.

a. Development and Screening of Remedial Alternatives (4.2)

The Respondents must begin to develop and evaluate a range of appropriate waste management options that at a minimum ensure protection of human health and the environment, concurrent with the RI site characterization task which must include the consideration of restoration, rehabilitation or replacement of, or compensation for, injured natural resources.

Refine and document remedial action objectives (4.2.1)

Based on the baseline human health and ecological risk assessment, the Respondents must review and if necessary modify the site-specific remedial action objectives, specifically the PRGs, that were established by U.S. EPA prior to or during negotiations between U.S. EPA, Ohio EPA and the Respondent. The revised PRGs must be documented in a technical memorandum that will be reviewed by U.S. EPA and Ohio EPA and approved by U.S. EPA. These modified PRGs must specify the contaminants and media of interest, exposure pathways and receptors, and an acceptable contaminant level or range of levels (at particular locations for each exposure route).

Develop general response actions (4.2.2)

The Respondents must develop general response actions for each medium of interest defining containment, treatment, excavation, pumping, or other actions, singly or in combination, to satisfy the remedial action objectives.

Identify areas or volumes of media (4.2.3)

The Respondents must identify areas or volumes of media to which general response actions may apply, taking into account requirements for protectiveness as identified in the remedial action objectives. The chemical and physical characterization of the site must also be taken into account.

Identify, screen, and document remedial technologies (4.2.4; 4.2.5)

The Respondents must identify and evaluate technologies applicable to each general response action to eliminate those that cannot be implemented at the site. General response actions must be refined to specify remedial technology types. Technology process options for each of the technology types must be identified either concurrent

with the identification of technology types, or following the screening of the considered technology types. Process options must be evaluated on the basis of effectiveness, implementability, and cost factors to select and retain one or, if necessary, more representative processes for each technology type. The technology types and process options must be summarized for inclusion in a technical memorandum. The reasons for eliminating alternatives must be specified.

Assemble and document alternatives (4.2.6)

The Respondents must assemble selected representative technologies into alternatives for each affected medium or operable unit. Together, all of the alternatives must represent a range of treatment and containment combinations that must address either the site or the operable unit as a whole. A summary of the assembled alternatives and their related action-specific ARARs must be prepared by the Respondents for inclusion in a technical memorandum. The reasons for eliminating alternatives during the preliminary screening process must be specified.

Refine alternatives

The Respondents must refine the remedial alternatives to identify contaminant volume addressed by the proposed process and sizing of critical unit operations as necessary. Sufficient information must be collected for an adequate comparison of alternatives. PRGs for each chemical in each medium must also be modified as necessary to incorporate any new human health and ecological risk assessment information presented in Respondent's baseline human health and ecological risk assessment report. Additionally, action-specific ARARs must be updated as the remedial alternatives are refined.

Conduct and document screening evaluation of each alternative (4.3)

The Respondents may perform a final screening process based on short and long term aspects of effectiveness, implementability, and relative cost. Generally, this screening process is only necessary when there are many feasible alternatives available for detailed analysis. If necessary, the screening of alternatives must be conducted to assure that only the alternatives with the most favorable composite evaluation of all factors are retained for further analysis. As appropriate, the screening must preserve the range of treatment and containment alternatives that was initially developed. The range of remaining alternatives must include options that use treatment technologies and permanent solutions to the maximum extent practicable. The

Respondents must prepare a technical memorandum summarizing the results and reasoning employed in screening, arraying alternatives that remain after screening, and identifying the action-specific ARARs for the alternatives that remain after screening.

b. Alternatives Development and Screening Deliverables (4.5)

The Respondents must prepare a technical memorandum summarizing the work performed in and the results of each task above, including an alternatives array summary. These must be modified by the Respondents if required by U.S. EPA's comments to assure identification of a complete and appropriate range of viable alternatives to be considered in the detailed analysis. This deliverable must document the methods, rationale, and results of the alternatives screening process.

TASK 6 - DETAILED ANALYSIS OF REMEDIAL ALTERNATIVES (RI/FS Guidance, Chapter 6)

The detailed analysis must be conducted by the Respondents to provide U.S. EPA and Ohio EPA with the information needed to allow for U.S. EPA's selection of a site remedy. This analysis is the final task to be performed by the Respondents during the FS.

a. Detailed Analysis of Alternatives (6.2)

The Respondents must conduct a detailed analysis of alternatives which must consist of an analysis of each option against a set of nine evaluation criteria and a comparative analysis of all options using the same evaluation criteria as a basis for comparison.

Apply nine criteria and document analysis (6.2.1 - 6.2.4)

The Respondents must apply nine evaluation criteria to the assembled remedial alternatives to ensure that the selected remedial alternative must be protective of human health and the environment; must be in compliance with, or include a waiver of, ARARs; must be cost-effective; must utilize permanent solutions and alternative treatment technologies, or resource recovery technologies, to the maximum extent practicable; and must address the statutory preference for treatment as a principal element. The evaluation criteria include: (1) overall protection of human health and the environment; (2) compliance with ARARs; (3) long-term effectiveness and permanence; (4) reduction of toxicity, mobility, or volume; (5) short-term effectiveness; (6) implementability; (7) cost; (8) state (or support agency) acceptance; and (9) community acceptance. (Note: criteria 8 and 9 are considered after the RI/FS report has been

released to the general public.) For each alternative the Respondents must provide: (1) a description of the alternative that outlines the waste management strategy involved and identifies the key ARARs associated with each alternative, and (2) a discussion of the individual criterion assessment. If the Respondents do not have direct input on criteria (8) state (or support agency) acceptance and (9) community acceptance, these must be addressed by U.S. EPA.

Compare alternatives against each other and document the comparison of alternatives (6.2.5; 6.2.6)

The Respondents must perform a comparative analysis between the remedial alternatives. That is, each alternative must be compared against the others using the evaluation criteria as a basis of comparison. Identification and selection of the preferred alternative are reserved for U.S. EPA. The Respondents must prepare a technical memorandum summarizing the results of the comparative analysis.

b. Detailed Analysis Deliverables (6.5)

In addition to the technical memorandum summarizing the results of the comparative analysis, the Respondents must submit a draft RI/FS report to U.S. EPA and Ohio EPA for review and U.S. EPA approval. The Respondents' analysis must include an analysis of each option for the restoration, rehabilitation or replacement of, or compensation for, injured natural resources.

Remedial Investigation and Feasibility study report (3.7.3 and 6.5)

The Respondents must prepare a draft RI/FS report for U.S. EPA and Ohio EPA review and U.S. EPA approval. This report shall summarize results of field activities to characterize the site, sources of contamination, nature and extent of contamination, the fate and transport of contaminants, nature and extent of injury to natural resources, the analysis of remedial alternatives. This report must include the methodology and results of the baseline human health and ecological risk assessment if deemed appropriate by U.S. EPA. The Respondents must refer to the RI/FS Guidance for an outline of the report format and contents. Following comment by U.S. EPA, the Respondents must prepare a final RI/FS report which satisfactorily addresses U.S. EPA's comments.

This report, as ultimately adopted or amended by U.S. EPA, provides a basis for remedy selection by U.S. EPA and documents the development and analysis of remedial alternatives. The Respondents must refer to the RI/FS Guidance for an outline of the report format and the required report content.

REFERENCES FOR CITATION

The following list, although not comprehensive, comprises many of the regulations and guidance documents that apply to the RI/FS process:

The (revised) National Contingency Plan

"Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA," U.S. EPA, Office of Emergency and Remedial Response, October 1988, OSWER Directive No. 9355.3-01.

"Guidance on Conducting Non-Time Critical Removal Actions Under CERCLA" (Publication 9360.0-32, August 1993)

"Interim Guidance on Potentially Responsible Party Participation in Remedial Investigation and Feasibility Studies," U.S. EPA, Office of Waste Programs Enforcement, Appendix A to OSWER Directive No. 9355.3-01.

"Guidance on Oversight of Potentially Responsible Party Remedial Investigations and Feasibility Studies," U.S. EPA, Office of Waste Programs Enforcement, OSWER Directive No. 9835.3

"A Compendium of Superfund Field Operations Methods," Two Volumes, U.S. EPA, Office of Emergency and Remedial Response, EPA/540/P-87/001a, August 1987, OSWER Directive No. 9355.0-14.

"EPA NEIC Policies and Procedures Manual," May 1978, revised November 1984, EPA-330/9-78-001-R.

"Data Quality Objectives for Remedial Response Activities," U.S. EPA, Office of Emergency and Remedial Response and Office of Waste Programs Enforcement, EPA/540/G-87/003, March 1987, OSWER Directive No. 9335.0-7B.

"Guidelines and Specifications for Preparing Quality Assurance Project Plans," U.S. EPA, Office of Research and Development, Cincinnati, OH, QAMS-004/80, December 29, 1980.

"Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans," U.S. EPA, Office of Emergency and Remedial Response, QAMS-005/80, December 1980.

"Users Guide to the EPA Contract Laboratory Program," U.S. EPA, Sample Management Office, August 1982.

"Interim Guidance on Compliance with Applicable or Relevant and Appropriate Requirements," U.S. EPA, Office of Emergency and Remedial Response, July 9, 1987, OSWER Directive No. 9234.0-05.

"CERCLA Compliance with Other Laws Manual," Two Volumes, U.S.

EPA, Office of Emergency and Remedial Response, August 1988 (draft), OSWER Directive No. 9234.1-01 and -02.

"Guidance on Remedial Actions for Contaminated Ground Water at Superfund Sites," U.S. EPA, Office of Emergency and Remedial Response, (draft), OSWER Directive No. 9283.1-2.

"Draft Guidance on Preparing Superfund Decision Documents," U.S. EPA, Office of Emergency and Remedial Response, March 1988, OSWER Directive No. 9355.3-02

"Risk Assessment Guidance for Superfund - Volume I Human Health Evaluation Manual (Part A)," December 1989, EPA/540/1-89/002

"Risk Assessment Guidance for Superfund - Volume II Environmental Evaluation Manual," March 1989, EPA/540/1-89/001
"Guidance for Data Useability in Risk Assessment," October, 1990, EPA/540/G-90/008

"Performance of Risk Assessments in Remedial Investigation /Feasibility Studies (RI/FSS) Conducted by Potentially Responsible Parties (PRPs)," August 28, 1990, OSWER Directive No. 9835.15.

"Role of the Baseline Risk Assessment in Superfund Remedy Selection Decisions," April 22, 1991, OSWER Directive No. 9355.0-30.

"Health and Safety Requirements of Employees Employed in Field Activities," U.S. EPA, Office of Emergency and Remedial Response, July 12, 1981, EPA Order No. 1440.2.

OSHA Regulations in 29 CFR 1910.120 (Federal Register 45654, December 19, 1986).

"Interim Guidance on Administrative Records for Selection of CERCLA Response Actions," U.S. EPA, Office of Waste Programs Enforcement, March 1, 1989, OSWER Directive No. 9833.3A.

"Community Relations in Superfund: A Handbook," U.S. EPA, Office of Emergency and Remedial Response, June 1988, OSWER Directive No. 9230.0#3B.

"Community Relations During Enforcement Activities And Development of the Administrative Record," U.S. EPA, Office of Programs Enforcement, November 1988, OSWER Directive No. 9836.0-1A.

"U.S. EPA Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments." EPA540-R-97-006. Office of Ecological and Remedial Response, Washington, D.C. 1997.

FOR MORE INFORMATION

For additional information contact:

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Associate Regional Council
Office of Regional Council (C-14J)
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77 West Jackson Blvd.
Chicago, IL 60604-3590

Phone: (312) 886-0552
Fax: (312) 886-7160
Email: nash.thomas@epa.gov

Gwendolyn Massenburg (SR-6J)
Remedial Project Manager
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77 West Jackson Blvd.
Chicago, IL 60604-3590

Phone: (312) 886-0983
Fax: (312) 886-4071
Email: massenburg.gwendolyn@epa.gov

INFORMATION REPOSITORY

U.S. EPA has established a file for public review called an information repository. The information repository contains documents related to the CRS site and the Superfund Program. The repository for Chemical Recovery Systems, Inc is located at:

Elyria Public Library
320 Washington Avenue
Elyria, Ohio 44035 (440) 325-5747



Official Business
Penalty for Private Use - \$300

U.S. Environmental Protection Agency
Region 5

77 West Jackson Boulevard
Chicago, IL 60604-3590



This fact sheet provides:

- A brief history of the site;
- A summary of the Site Team Evaluation Prioritization (STEP) Report;
- Information on future planned activities for the site;
- A list of contacts and sources for additional information

United States
Environmental Protection
Agency

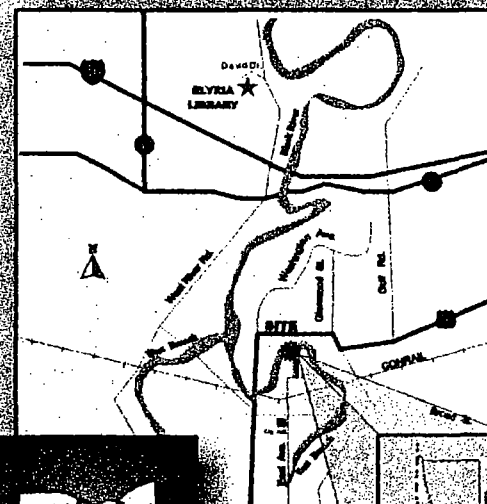
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77 West Jackson Boulevard
Chicago, Illinois 60604-3590

Illinois, Indiana
Michigan, Minnesota
Ohio, Wisconsin

CHEMICAL RECOVERY SYSTEMS, INC. SUPERFUND SITE

Elyria, Lorain County, Ohio

JUNE 2001



Supplemental Information for Small Businesses Subject to an U.S. EPA Enforcement Action

The United States Environmental Protection Agency (EPA) offers small businesses a wide variety of compliance assistance resources and tools designed to assist businesses to comply with federal and state environmental laws. These resources can help businesses understand their obligations, improve compliance and find cost-effective ways to comply through the use of pollution prevention and other innovative technologies.

Websites

EPA offers a great deal of compliance assistance information and materials for small businesses on the following Websites, available through public libraries:

| | |
|--|---|
| ⇒ www.epa.gov | <i>EPA's Home Page</i> |
| ⇒ www.smallbiz-enviroweb.org | <i>EPA's Small Business Home Page</i> |
| ⇒ www.smallbiz-enviroweb.org/state.html | <i>List of State Contacts</i> |
| ⇒ www.epa.gov/ttn/sbap | <i>Small Business Assistance Programs</i> |
| ⇒ www.epa.gov/oeca/polguid/index.html | <i>Enforcement Policy and Guidance</i> |
| ⇒ www.epa.gov/oeca/smbusi.html | <i>Small Business Policy</i> |
| ⇒ www.epa.gov/oeca/oc | <i>Compliance Assistance Home Page</i> |
| ⇒ www.epa.gov/oeca/ccsmd/commpull.html | <i>Small Businesses and Commercial Services</i> |
| ⇒ www.epa.gov/oeca/ccsmd/mun.html | <i>Small Communities Policy</i> |

Hotlines

EPA sponsors approximately 89 hotlines and clearinghouses that provide a free and convenient avenues to obtain assistance with environmental requirements. The Small Business Ombudsman Hotline can provide you with a list of all the hot lines and assist you with determining which hotline will best meet your needs. Key hotlines that may be of interest to you include:

| | |
|---|----------------|
| ⇒ Small Business Ombudsman..... | (800) 368-5888 |
| ⇒ RCRA/UST/CERCLA Hotline..... | (800) 424-9346 |
| ⇒ Toxics Substances and Asbestos Information..... | (202) 554-1404 |
| ⇒ Safe Drinking Water..... | (800) 426-4791 |
| ⇒ Stratospheric Ozone/CFC Information..... | (800) 296-1996 |
| ⇒ Clean Air Technical Center..... | (919) 541-0800 |
| ⇒ Wetlands Hotline..... | (800) 832-7828 |

Compliance Assistance Centers

EPA has established national compliance assistance centers, in partnership with industry, academic institutions, and other federal and state agencies, that provide on line and fax back assistance services in the following sectors heavily populated with small businesses:

- ⇒ Metal Finishing (www.nmfrc.org)
- ⇒ Printing (1-888-USPNEAC or www.pneac.org)
- ⇒ Automotive (1-888-GRN-LINK or www.ccar-greenlink.org)

**CHEMICAL RECOVERY SYSTEMS
UPDATED PRP ADDRESS LIST**

- | | |
|--|---|
| 1. 3 M Corp. Attn.: Brian Davis P.O. Box 33428 St. Paul, MN 55133-3428 | 9. Foley and Lardner Attn: Tanya O'Neill 777 E Wisconsin Ave. Milwaukee, WI 53202-5367 (re: Allis Chalmers) |
| 2. Smith and Condemi Co., LPA Attn: Bruce Illes 1801 East 9 th Street, Suite 900 Cleveland, OH 44114 (re: Adams Automatic Inc.) | 10. Jones, Day, Reavis & Pogue Attn: Thomas Hamilton 901 Lakeside Ave. Cleveland, OH 44114-1190 (re: Alside) |
| 3. Black McCuskey Souers & Arbaugh Attn: Victor Marsh 1000 United Bank Plaza 220 Market Avenue South Canton, OH 44702-2116 (re: Adelphia) | 11. American Colors, Inc. Attn: Jim Sayre 1110 Edgewater Drive Sandusky, OH 44870 |
| 4. Parker Hannifin Airborne Division Attn: Chris Burich 6035 Parkland Blvd Cleveland, OH 44124-4141 | 12. American Greetings Corp. Attn: Michelle Creger One American Road Cleveland, OH 44144-2938 |
| 5. KOA Speer Electronics f/k/a Airco Speer Electronics Bolivar Drive, PO Box 547 Bradford PA 16701 | 13. American Marietta P.O. Box 11176 Southport, NC 28461-1176 |
| 6. Akron Rubber Company R. G. Jeter, Registered Agent 147 Kenilworth Drive Akron, OH 44313 | 14. Ashland Chemical, Inc. Robin Lampkin-Isabel P.O. Box 2219 Columbus, OH 43216 (re: Cleveland, OH) |
| 7. Allegheny Label Co. 1224 Freedom Road Cranberry Township, PA 16066 | 15. Ashland Chemical, Inc. Robin Lampkin-Isabel P.O. Box 2219 Columbus, OH 43216 (re: Freedom, PA) |
| 8. Chemcentral f/k/a Allegheny Solvents & Chemical P.O. Box 730 Bedford Park, IL 60499-0730 | 16. Ashland Chemical, Inc. Robin Lampkin-Isabel P.O. Box 2219 Columbus, OH 43216 (re: Dayton, OH) |

17. Ashland Chemical, Inc.
Robin Lampkin-Isabel
P.O. Box 2219
Columbus, OH 43216 (re: Akron, OH)
18. Astatic Corp.
P.O. Box 120
Conneaut, OH 44030
19. Auto & Industrial Finishes
Attn: Kevin R. Kehoe
9070 Marshall Road
Cranberry Township, PA 16066
20. Squire, Sanders & Dempsey L.L.P.
Attn: Douglas McWilliams
4900 Key Tower
127 Public Square
Cleveland, OH 44114-1304 (re: Avery Label)
21. Thompson Hine
Attn: Heidi Goldstein
3900 Key Center
127 Public Square
Cleveland, OH 44114-1291 (re: BF Goodrich)
22. McGregor & Patterson
Attn: J Russell McGregor
105 Smithfield Street, Suite 200
Pittsburgh, PA 15222
(re: Ball/Ranbar/BBT)
23. Squires Sanders & Dempsey
Attn: Vincent Atriano
1300 Huntington Center
41 South High Street
Columbus, OH 43215 (re: Barr, Inc.)
24. Basic Packaging Machinery Corp.
642 Sugar Lane
Elyria, OH 44035
25. Walton Paint Company
d/b/a Beaver Paint Company
Attn: Joseph Walton
108 Main Street
Jamestown, PA 16134
26. Thompson Hine
Attn: Andrew Kolesar
312 Walnut Street, 14th floor
Cincinnati, OH 45202-4029
(re: Berenfield Steel Drum)
27. Black McCuskey Souers & Arbaugh
Attn: Victor Marsh
1000 United Bank Plaza
220 Market Avenue South
Canton, OH 44702-2116 (re: Bison)
28. Vorys, Sater, Seymour and Pease
Attn: Joe Blasko
52 East Gay Street
Columbus, OH 43216-1008
(re: Borden Chemical)
29. Borg Warner
Attn: Stephanie Bransfield
200 South Michigan Avenue
Chicago, IL 60604
30. Lathrop & Gage
Attn: Jonathan Haden
2345 Grand Blvd., Ste 2800
Kansas City, MO 64108-2612 (re: BFI)
31. Whyte, Hirschboeck & Dudek
Attn: Jennifer Buzdecky
111 East Wisconsin Ave., Ste 2100
Milwaukee, WI 53202 (re: Bucyrus Erie)
32. Bud Industries, Inc.
Attn: Ravi Jain
P.O. Box 998
Willoughby, OH 44096

33. Aztec Peroxides, Inc.
f/k/a Carmac Chemical
555 Garden Street
Elyria, OH 44035
34. CNA Holdings
f/k/a Celanese Coatings
Attn: Tema Macarro
86 Morris Avenue
Summit, NJ 07901
35. Checkmate Boats
3691 State Route 4
Bucyrus, OH 44820
36. McDermott, Will & Emery
Attn: Louis Rundio, Jr.
227 W. Monroe St.
Chicago, IL 60606 (re: Chemcentral)
37. Chemical Distributors, Inc.
Attn: M. Gary Russell
80 Metcalfe Street
Buffalo, NY 14206
- Doepken Keevican & Weiss, P.C.
Attn: Terry L. Schnell
58th Floor, USX Tower
600 Grant Street
Pittsburgh, PA 15219-2703 (re: Chemical Dist.)
38. Waste Management
f/k/a Chem-Trol Pollution Control Services
Attn: James Forney
3970 Heritage Avenue
Okemos, MI 48864
39. Chemtron Corp.
Attn: Richard Timm
35850 Schneider Ct.
Avon, OH 44011
40. Howard & Howard
Attn: Gary Peters
39400 Woodward Avenue, Suite 101
Bloomfield Hills, MI 48304-5151
(Re: Chrysler Plastics)
- DaimlerChrysler Corporation
f/k/a Chrysler Plastic Products Co.
Attn: Kathleen Hennessey, CIMS 485-13-62
1000 Chrysler Drive
Auburn Hills, MI 48236-2808
41. Ingersoll-Rand
Attn: Donna McMahon
200 Chestnut Ridge Road
Woodcliff Lake, NJ 07677
(re: Clark Equipment)
42. Clyde Paint & Supply Co.
Gerald F. Thomas, Registered Agent
301 Lisa Ann Drive
Huron, OH 44839
43. Cytec Industries, Inc.
Attn: Thomas Waldman
Five Garret Mtn Plaza
West Paterson, NJ 07424
(re: Conap, Inc.)
44. Conneaut Leather, Inc.
Attn: Howard Bartow
4114 Carpenter Road
Ashtabula, OH 44004
45. Dwyer, Kinburn, Hall & Golub
Attn: Terrence Dwyer
16 Furler Street
Totowa, NJ 07511-0437
(re: Continental Can/Kiewit)
- Crown Cork & Seal
f/k/a Continental Can
Attn: William Gallagher
One Crown Way
Philadelphia, PA 19154

46. Cuyohoga Chemical Company
Attn: Paul Moffat
3470 West 140th Street
Cleveland, OH 44111-2431
47. Thompson Hine
Attn: Michael Cyphert
3900 Key Center
127 Public Square
Cleveland, OH 44114-1291
(re: DeSantis Coatings)
48. Baker & Hostetler, LLP
Attn: Jason Perdion
3200 National City Center
1900 East 9th Street
Cleveland, OH 44114-3485
(re: Dorn Color)
49. Dow Corning Corporation
Attn: Edward Ovsenik
2200 West Salzburg Road
Auburn, MI 48611
50. E.I. duPont de Nemours
f/k/a DuPont Chemical
Attn: Barbara Gravely, D-7083
1007 Market Street
Wilmington, DE 19898
51. Duracote Corporation
Attn: Gerald Donnelly
350 North Diamond Street
Ravenna, OH 44266-1209
52. Kovitz Shifrin & Waitzman
Attn: Richard Hillsberg
750 Lake Cook Road, Suite 350
Buffalo Grove IL 60089 (re: Eagle Rubber)
- Alan Plotkin
18 East 48th Street, Floor 18
New York, NY 10017 (re: Eagle Rubber)
53. Eastman Kodak
Attn: Elliott Stern
343 State Street
Rochester, NY 14650-0217
54. Centria
f/k/a Elwin G. Smith
1005 Beaver Grade Road
Coraopolis, PA 15108
- AK Steel Corporation
f/k/a Elwin G. Smith
703 Curtis Street
Middletown, OH 45043
55. Elyria Concrete Step Company
Attn: Everett Goad
8015 North Murray Ridge Road
Elyria, OH 44035
56. Elyria Foundry
Attn: Samuel Knezevic
120 Filbert Street
Elyria, OH 44036
- Chromalloy American Corp.
f/k/a Elyria Foundry
120 S Central Ave.
St Louis, MO 63105
57. Dow Chemical Co.
f/k/a Essex Chemical-Jamestown Finishes
Attn: Tracy Goad Walter
2030 Dow Center
Midland, MI 48676
58. FBC Chemical Corporation
Attn: Lad Hudac
P.O. Box 599
Mars, PA 16046
59. Squire, Sanders & Dempsey L.L.P.
Attn: Douglas McWilliams
4900 Key Tower
127 Public Square
Cleveland, OH 44114-1304 (re: Avery/Fasson)

60. Joondeph & Bittel
Attn: Dale Wilson
50 South Main Street, Suite 700
Akron, OH 44308 (re: Ferriot Bros)
61. Hanna, Campbell & Powell
Attn: David Moss
3737 Embassy Parkway
P.O. Box 5521
Akron, OH 44334 (re: Firestone)
- Jones, Day, Reavis & Pogue
Attn: Heidi Hughes Bumpers
901 Lakeside Ave.
Cleveland, OH 44114-1190 (re: Firestone)
62. Mattel, Inc.
f/k/a Fisher Price Toys
Attn: Gregg Clark
333 Continental Blvd.
El Segundo, CA 90245-5012
- Morrison & Foerster
Attn: Peter Hsiao
555 West Fifth Street
Los Angeles, CA 90013 (re: Fisher Price Toys)
63. Ford Motor Company
Attn: Kathy Hofer
Parklane Towers West Ste 1500
Three Parklane Blvd.
Dearborn, MI 48126-2568
64. Foseco, Inc.
Attn: Frank Simcic
20200 Sheldon Road
Cleveland, OH 44142 (re: Brookpark)
65. Foseco, Inc.
Attn: Frank Simcic
20200 Sheldon Road
Cleveland, OH 44142 (re: Conneaut)
66. Vorys, Sater, Seymour and Pease
Attn: Martyn Brodnik
52 East Gay Street
P.O. Box 1008
Columbus, OH 43216-1008
(re: Franklin Glue)
67. General Electric Company
Attn: Michael Elder
320 Great Oaks Office Park, Ste. 323
Albany, NY 12203
- Young Sommer LLC
Attn: Dean Sommer
Five Palisades Drive
Albany, NY 12205
(re: General Electric)
68. General Motors
Attn: Linda Bentley (MC 482-C24-D24)
300 Renaissance Center
Detroit, MI 48243 (re: Lordstown)
69. Continental General Tire
f/k/a General Tire
1800 Continental Blvd.
Charlotte, NC 28273
70. Glidden Co.
Attn: Robert Kovalak
925 Euclid Avenue, Suite 900
Cleveland, OH 44115
71. Goodyear Tire & Rubber Co.
Attn: Neal Rountree
1144 E. Market Street
Akron, OH 44316
72. Reale & Fossee
Attn: C.S. Fossee
625 Stanwix Street, Ste 2405
Pittsburgh, PA 15222 (re: Gordon Terminal)

73. GLS Corporation
Attn: Nancy Dehmloew (Great Lakes Terminal)
P.O. Box 3208
Arlington Heights, IL 60006-3208
74. Centria
f/k/a H.H. Robertson
1005 Beaver Grade Road
Coraopolis, PA 15108

Heico Acquisitions
f/k/a H.H. Robertson
70 W. Madison St. Ste 5600
Chicago, IL 60602
75. Goldberg, Stinnett, Meyers & Davis
Attn: Katherine Ray
44 Montgomery St., Ste 2900
San Francisco, CA 94104 (re: Hexcel)

Hexcel Corporation
Attn: A. William Nosil
11711 Dublin Boulevard
Dublin, CA 94568

David B. Graham
Baker & Hostetler LLP
1900 East 9th Street
Cleveland, OH 44114-3485
(re: Hexcel)
76. ITW Food Equipment
Attn: Steve Adams
701 S Ridge Avenue
Troy, OH 45374 (re: Hobart/Grove City)
77. ITW Food Equipment
Attn: Steve Adams
701 S Ridge Avenue
Troy, OH 45374 (re: Hobart/Dayton)
78. Black McCuskey Souers & Arbaugh
Attn: Victor Marsh
1000 United Bank Plaza
220 Market Avenue South
Canton, OH 44702-2166
(re: Hoover Company)
79. Calfee, Halter & Griswold LLP
Attn: Susan Strom
1400 McDonald Investment Center
800 Superior Avenue
Cleveland, OH 44114-2688 (re: Hukill)
80. Henkel Corporation
f/k/a Dexter Corp./Dexter-Hysol
Attn: Juliette Richter
2200 Renaissance Blvd., Suite 200
Gulph Mills, PA 19406

Kenneth Arnold
49 Valley Drive-Suite 200
Furlong, PA 18925 (re: Henkel/Dexter)

Akzo Nobel Inc.
Attn: Brian Curtis
300 South Riverside Plaza, Suite 2200
Chicago, IL 60606 (re: Dexter Corp.)
81. Industrial Chemical Corp.
f/k/a Industrial Alkali
885 W Smith Rd.
Medina, OH 44256
82. J. C. Whitlam Manufacturing Co.
Attn: Steve Carey
P.O. Box 380
Wadsworth, OH 44282-0380
83. Jamestown Paint & Varnish Co.
Attn: Joseph Walton
108 Main Street
Jamestown, PA 16134

84. Duramax, Inc.
f/k/a Johnson Plastics
16025 Johnson Street
Middlefield, OH 44062
85. Kalcor Coatings Co.
Attn: Newton Zucker
37721 Stevens Blvd.
Willoughby, OH 44094
86. Foley, Hoag & Eliot
Attn: Monica Conyngham
One Post Office Square
Boston, MA 02109
(Re: Kenner/Hasbro)
87. Shumaker, Loop & Kendrick
Attn: Jeffrey Fort
1000 Jackson
Toledo, OH 43624
(re: Lake Shore Industries)
88. Liberty Solvents & Chemical Co.
Attn: Raymond Pasquali
9429 Ravenna Road
Twinsburg, OH 44087
89. BASF Corporation
Attn: Harry Baumgartner
3000 Continental Drive - North
Mount Olive NJ 07828
(re: BASF/Limbacher)
90. Jones, Day, Reavis & Pogue
Attn: John Rego
901 Lakeside Ave.
Cleveland, OH 44114-1190
(re: Lorain Products)
91. Babst, Calland, Clements & Zominir
Attn: Michele Gutman
Two Gateway Center
Pittsburgh, PA 15222 (re: Luxaire)
- VIACOM Inc.
Attn: Linda Kelley
MC745
11 Stanwix Street
Pittsburgh, PA 15222-1384 (re: Luxaire)
92. Mahoning Paint Corporation
653 James St.
Youngstown, OH 44502
93. McMahon, DeGulis, Hoffman & Lombardi
812 Huron Road, Ste 650
Canton, OH 44115-1126
(re: Mameco International)
94. Marlite Division
202 Harger Street
Dover, OH 44622
95. Masonite Corporation
One South Wacker Drive, Suite 3600
Chicago, IL 60606
96. Miller Studio, Inc
Attn: John Basiletti
P.O. Box 997
New Philadelphia, OH 44663
- Lundgren Goldthorpe & Zumbar
Attn: Andrew Zumbar
526 East Main Street
Alliance, OH 44601-0595
(re: Miller Studio)
97. Exxon Mobil
Attn: J Kyle Harris
601 Jefferson Room 1221
Houston, TX 77002 (re: Mobil Chemical)
98. Warren and Young
Attn: Stuart Cordell
134 W 46th Street
Ashtabula, OH 44005-2300
(re: Molded Fiberglass)

99. National Acme
170 E. 131st Street
Cleveland, OH 44108
100. Rexam Beverage Can Americas
f/k/a National Can
8770 W Bryn Mawr, Floor 1
Chicago, IL 60631
101. Neville Chemical Company
Attn: Thomas McKnight
2800 Neville Road
Pittsburgh, PA 15225-1496
102. Nolwood Chemical
8970 Hubbell Avenue
Detroit, MI 48228
103. Nordson Corporation
Attn: Robert Veillette
28601 Clemens Road
Westlake, OH 44145
104. Philip Services
Attn: Michael Chimitris
9700 Higgins Road, Suite 750
Rosemont, IL 60018 (re: Nortru)
105. Day, Berry & Howard
Attn: Tricia Haught
CityPlace I
Hartford, CT 06103-3499 (re: Ohio Brass)
106. Thomas Pannett
Ohio Attorney General's Office
140 East Troy St., 12th floor
Columbus, OH 43215-4132 (re: Ohio DOT)
107. Yenkin Majestic Paint Corporation
Ohio Polychemical Division
Attn: Merom Brachman
1920 Leonard Avenue
Columbus, OH 43219
108. Thompson Hine
Attn: Heidi Goldstein
3900 Key Center
127 Public Square
Cleveland, OH 44114-1291
(re: Owens Illinois)
109. P & K Oil Service, Inc.
PO Box 22024
Beachwood, OH 44122-0024
110. FirstEnergy
Attn: Douglas Weber
76 South Main St
Akron, OH 44308
(re: Painesville Nuc. Pwr)
111. Pfizer, Inc.
f/k/a Parke-Davis & Company
Attn: Corporate EH&S
235 E. 42nd St.
New York, NY 10017
112. Plas-Tanks Industries, Inc.
Attn: J. Kent Covey
39 Standen Drive
Hamilton, OH 45015
113. Valspar
Attn: Ronda Bayer
1101 S Third St.
Minneapolis, MN 55415 (re: Plasti-Kote)
114. PPG Industries
Attn: Paul King
One PPG Place
Pittsburgh, PA 15272 (re: Cleveland)
115. PPG Industries
Attn: Paul King
One PPG Place
Pittsburgh, PA 15272 (re: Springdale PA)

116. PPG Industries
Attn: Paul King
One PPG Place
Pittsburgh, PA 15272 (re: Circleville, OH)
117. Amer Cunningham Co.
Attn: Michael S. Urban
159 S. Main St.
Akron, OH 44308-1322
(re: Quality Synthetic Rubber)
118. Scott Fetzer Company
f/k/a Quikut
Attn: Patricia Scanlon
28800 Clemens Road
Westlake, OH 44145-1197

Jones, Day, Reavis & Pogue
Attn: Thomas Hamilton
901 Lakeside Avenue
Cleveland, OH 44114-1190 (re: Quikut)
119. R. W. Beckett Corp.
Attn: Donald Brackenhoff
P.O. Box 1289
Elyria, OH 44036-1289
120. LTV Steel
f/k/a Republic Steel
Attn: T.A. Zalenski
200 Public Square
Cleveland, OH 44114-2308
121. Babst, Calland, Clements, Zomnir
Attn: Kevin Garber
2 Gateway Center
Pittsburgh, PA 15222 (re: Rexroth)
122. Ross Incineration Services, Inc.
f/k/a Robert Ross & Son's, Inc.
36790 Giles Rd.
Grafton, OH 44044
- Wickens, Herzer, Panza Cook & Batista
Attn: Richard Panza
1144 West Erie Avenue
Lorain OH 44052
(re: Robert Ross & Sons)
123. Rockwell International
Attn: Gary Ballesteros
777 E Wisconsin Ave., Ste 1400
Milwaukee, WI 53202
124. Shell Oil Company
Attn: Mary Smith, Room 4881 OSP
P.O. Box 2463
Houston, TX 77252-2463
125. Sherwin Williams Co.
Attn: Allen Danzig
101 Prospect Avenue NW
Cleveland, OH 44115-1075 (re: Mayfield Village)
126. Sherwin Williams Co.
Attn: Allen Danzig
101 Prospect Avenue NW
Cleveland, OH 44115-1075 (re: Cincinatti)
127. Honeywell
f/k/a Sinclair & Valentine
Attn: Heleen Schiller
P.O. Box 2245
Morristown, NJ 07962-2245
128. Sherwin Williams Co.
Attn: Allen Danzig
101 Prospect Avenue NW
Cleveland, OH 44115-1075 (re: Sprayon)
129. Moen
f/k/a Stanadyne, Inc
Attn: Dennis McKinney
25300 Al Moen Drive
North Olmsted, OH 44070-8022

130. LeBoeuf, Lamb, Greene & McRae
Attn: Patricia Shaw
One Gateway Center
420 Fort Duquesne Blvd., Ste 1600
Pittsburgh, PA 15222-1437 (re: Stolle Corp.)
131. LeBoeuf, Lamb, Greene & McRae
Attn: Patricia Shaw
One Gateway Center
420 Fort Duquesne Blvd., Ste 1600
Pittsburgh, PA 15222-1437 (re: Stolle Prod.)
132. Superior Screw
P.O. Box 92046
Elk Grove, IL 60009
133. Vorys, Sater, Seymour and Pease
Attn: Scott Doran
52 East Gay Street
Columbus, OH 43216-1008 (re: Taylor Metals)
134. Cotsirilos, Tighe & Streicker, Ltd.
Attn: Ann Tighe
33 North Dearborn Street, Suite 600
Chicago, IL 60602
(re: Technical Products Inc.)
135. Dean & Fulkerson
Attn: James O'Brien
801 West Big Beaver Road, Suite 500
Troy, MI 48084
(re: Tecumseh Products Co.)
136. Hanna, Campbell & Powell
Attn: David Moss
3737 Embassy Parkway
P.O. Box 5521
Akron, OH 44334 (re: Temperature Controls)
137. ShawPittman
Attn: Jeffrey Knight
2300 N Street NW
Washington, DC 20037 (re: Therm-o-Disc)
138. Babst, Calland, Clements Zomnir
Attn: Lindsay Howard
Two Gateway Center
Pittsburgh, PA 15222
(re: Thomas Steel Strip Corporation)
139. TRW
Attn: Timothy O'Neill
1900 Richmond Road
Cleveland, OH 44124 (re: Ross Gear)
140. TRW
Attn: Timothy O'Neill
1900 Richmond Road
Cleveland, OH 44124 (re: Valve Division)
141. U.S. Chemical
Attn: Andrew Lesko
600 Nova Drive SE
Massillon, OH 44648-0709
142. Dow Chemical Co.
f/k/a Union Carbide Corp.
2030 Dow Center
Midland, MI 48674
143. Crompton
Attn: Jeffrey Bailot/Pamela Missal
Benson Road
Middlebury, CT 06749 (re: Uniroyal)
- Michelin NA
Attn: James Fannin
P.O. Box 19001
One Parkway South
Greenville, SC 29615 (re: Uniroyal)
- Uniroyal Technology Corp.
f/k/a Uniroyal Plastics
2 North Tamiami Trail #900
Sarasota FL 34236-5568

144. Fulbright & Jaworski
Attn: Eva Fromm O'Brien
1301 McKinney, Suite 5100
Houston, TX 77010
(re: Universal Cooperatives)
145. Vorys, Sater, Seymour and Pease
Attn: Joe Blasko
52 East Gay Street
Columbus, OH 43216-1008
(re: Vanguard Paints)
146. Tommy Armour Golf
f/k/a Victor Comptometer-Golf
8350 North Lehigh Avenue
Morton Grove, IL 60053
147. Doepken Keevican & Weiss, P.C.
Attn: Terry L. Schnell
58th Floor, USX Tower
600 Grant Street
Pittsburgh, PA 15219-2703 (re: W.J. Ruscoe)
148. Whirlpool Corp. - Clyde Division
Attn: Larry Yinger
2000 N M-63
Benton Harbor, MI 49022-2692
149. Whirlpool Corp. - Findlay Division
Attn: Larry Yinger
2000 N M-63
Benton Harbor, MI 49022-2692
150. Buckingham, Doolittle & Burroughs
Attn: Ralph Amiet
50 S Main Street
Akron, OH 44309-1500 (re: Wooster Brush)
151. Yenkin Majestic Paint Corporation
Attn: Merom Brachman
1920 Leonard Avenue
Columbus, OH 43219